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SITE INVESTIGATION

VOLUME I

GUIGNON AND GREEN CO.

AKA: CONTINENTAL TURPENTINE & ROSIN CORP.

AKA: CALI CARTING

KEARNY, HUDSON COUNTY, NEW JERSEY

EPA ID NO.: ~~NJD982741498~~

NJ0980757579



New Jersey Department of Environmental Protection
Division of Publicly Funded Site Remediation
Office of Site Assessment

11/22/94

217034



GUIGNON AND GREEN CO.
AKA: CONTINENTAL TURPENTINE & ROSIN COMPANY
410 BERGEN AVENUE
KEARNY, HUDSON COUNTY, NEW JERSEY

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NARRATIVE

SITE INVESTIGATION REPORT

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PART I: GENERAL INFORMATION

Site Name: Guignon and Green Co.
AKA: Continental Turpentine & Rosin Corporation
Address: 410 Bergen Avenue
Municipality: Kearny **State:** N.J. **Zip Code:** 07032
County: Hudson
EPA ID No.: ~~NJD982741198~~ *NJD980757579 (A98-4/1/97)*
Block: 252 **Lot(s):** 3C
Latitude: 40° 45' 14" **Longitude:** 74° 8' 33"
Acreage: 0.87 **SIC Code:** 4212

Current Owner: Continental Turpentine & Rosin Corporation (CT&RC)
Mailing Address: P.O. Box QQ
City: Cross City **State:** Florida **Zip Code:** 32628

Current Operator: Cali Carting Company
Mailing Address: 410 Bergen Avenue
City: Kearny **State:** New Jersey **Zip Code:** 07032
Telephone No: 201-991-5400

Owner/Operator History:

<u>NAME</u>	<u>OPERATOR/ OWNER</u>	<u>FROM</u>	<u>DATES</u> <u>TO</u>
Cali Carting Co.	operator	1985	present
Guignon and Green Co.	operator	1966	1985
CT&RC	owner	1966	present

Guignon and Green entered into negotiations with John H. Cali Company (Cali Carting Company) for the sale of the property during the first week of December 1985. Cali Carting instead leased the property pending an agreement to pursue final sale under a clause in which the buyer assumes responsibility for the site cleanup.

Prior to 1966 the property was vacant and undeveloped. Guignon and Green occupied the site since 1966 on a lease basis and purchased the site in March 1982. (Attachment A)

Surrounding Land Use (zoning, adjacent properties):

The facility is situated in a low-lying industrialized section of Kearny and is bordered to the south and east by drainage swales, the west by Yeskel Development and the north by the Lexington Warehouse and Reliable-Miller Casket Co. (Attachment L)

Distance to Nearest Residence or School: 0.2 mile (residence)
Direction: northwest
Population Density (residents per square mile): 3,815

PART II: SITE OPERATIONS

Discuss all current and past operations at the site. Identify all waste sources, the type and quantity of hazardous waste at each source and the type of containment for each source.

Guignon and Green is a wholly-owned subsidiary of Continental Turpentine and Rosin Corporation which was acquired by Continental Turpentine for the sole purpose of wholesale marketing of naval store, pine oil, turpentine, tall oil rosin and related products. Guignon and Green built a warehouse and related structures on site in 1966 on a lease basis and purchased the property in March 1982. Prior to this, the site was reportedly not used for commercial or industrial purposes. No manufacturing has reportedly taken place at the facility and subsequently no hazardous waste was generated on site. Most of the products and raw materials were stored in stationary aboveground steel tank cars. Some of the stored products were solids or semi-solids at ambient temperatures and therefore many of the tank cars were equipped with heating coils to keep the products fluid to facilitate easy transfer. Raw materials were transported to and from the facility via railcar or tank trucks. (Attachment L)

The following aboveground tank cars were located at the facility for raw materials storage while under the operation of Guignon and Green:

1. A 3-compartment aboveground stainless-steel tank car with heating coils for the storage of pine oil and fatty acids.
2. A 2-compartment aboveground stainless-steel tank car with heating coils for the storage of pine oil and fatty acids.
3. A 7,000-gallon aboveground black iron tank car which was usually empty.
4. A 3-compartment aboveground black iron tank car with a 6,300-gallon capacity for the storage of turpentine.
5. A 1-compartment aboveground black iron tank car with a 10,000-gallon capacity for the storage of turpentine.
6. A 1-compartment aboveground black iron tank car with a 8,000-gallon capacity for the storage of turpentine.

7. A 4,000-gallon tank car for the storage of kerosene and mineral spirits.

In addition to the tank cars was a 500-gallon aboveground fuel oil storage tank which is no longer in use. (Attachment A)

Fifty-five gallon steel drums containing non-hazardous substances were also stored and handled throughout the unpaved yard and within the warehouse.

The Cali Carting Company is a garbage transporting business operating on site since 1985. The facility is used for the storage of garbage trucks and does not function as a transfer station for refuse. The business began with three trucks and has since been expanded to ten. Vehicular maintenance is contracted out to the Jason Equipment Overhaul Company of Kearny, New Jersey. The fenced facility consists of a 1,440-square-foot, 1-story unheated warehouse with reinforced concrete footings and concrete floor, a pump house and a small shed. The lot is partially paved with asphalt with the remainder covered with light gravel. Administrative tasks are carried out in a 240-square foot office leased from an adjacent industrial establishment. (Attachment L)

In May 1990, Cali Carting cleared vegetation from an unoccupied strip of land designated as wetlands, approximately 15 to 20 feet due east of their property, in order to facilitate a truck route. Approximately 140 cubic yards of woodchips were placed on the ground for traction during periods of heavy rainfall. An oil spill of unknown origin occurred approximately one to two weeks later, saturating the chips with oil. Two samples collected from the spill area on or about July 16, 1990 by Geraghty & Miller of Rochelle Park, New Jersey and analyzed by Enesco East of Somerset, New Jersey, indicated that the material was motor oil with an unidentifiable compound. The source of the spill was not determined and a cleanup was never initiated. (Attachments S and T)

An ECRA review (Case # 86034) was initiated following the cessation of operations by Guignon and Green in 1985. As a result, in May 1986, Guignon & Green retained Geraghty & Miller, Inc. to prepare and implement an initial soil quality assessment as part of the ECRA investigation. In addition, a ground water quality survey was conducted from January through March 1988. Areas of environmental concern identified as part of the investigation included the following:

- Area A - former drum storage area
- Area B - former tank car 7 spill area
- Area C - diesel fuel tank area
- Area D - former pump house

Seventy-five cubic yards of soil was excavated from these areas of concern. Post excavation samples collected from the sidewalls of each excavation, along with samples collected from the excavation perimeters, ground water samples and samples collected from the adjacent drainage swale, indicated that a release of hazardous substances (base neutrals, petroleum hydrocarbons, volatile organic compounds and heavy metals) may have occurred as a result of past site operations. A Sampling Plan Addendum was submitted to the NJDEP, Bureau of Environmental Evaluation Cleanup Responsibility Assessment (BEECRA) in June 1991, detailing the final phase of the cleanup plan; however, the plan was never initiated due to the current tenant's fear that remediated areas would be recontaminated from off-site sources (oil spill). BEECRA considers the case ECRA recalcitrant and it was therefore transferred to the Office of Site Assessment for further investigation. (Attachments A,C,D,F,I,K,L,N,O)

A large, aboveground 2,000-gallon storage tank that is no longer in service is situated just north of the pumphouse. The tank was used for a short period of time to refuel the vehicles on site. Company trucks are now refueled off site. Another 2,000-gallon tank located to the east of the shed was to be sold as scrap metal. The tank was never in use. Two roll-offs (approximately 20 cubic yards), used for scrap metal storage, are kept along the eastern property boundary.

An aerial photograph review conducted by the NJDEP, Division of Publicly Funded Site Remediation (DPFSR), Office of Site Assessment (OSA) indicated that the property was vacant and undeveloped until the late 1960s. Heavy landfilling activity was evident in the surrounding area which was predominantly wetlands.

PART III. PERMITS:

A. NJPDES

<u>Number</u>	<u>Discharge Activity</u>	<u>Date Issued</u>	<u>Expiration Date</u>	<u>Formation or Body of Water Discharged To</u>
none				

B. New Jersey Air Pollution Control Certificates

Plant ID No.: NA
No. of Certificates: 0
Equipment Permitted: 0

C. BUST Registration

Registration No.: not applicable

No. of Tanks: 0

<u>Tank No.</u>	<u>Capacity (gallons)</u>	<u>Contents of Tank</u>	<u>Integrity</u>
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There were no reported underground storage tanks on record for this facility.

D. Other Permits

<u>Agency Issuing Permit</u>	<u>Type of Permit</u>	<u>Permit No.</u>	<u>Date Issued</u>	<u>Expiration Date</u>
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none

PART IV: GROUND WATER ROUTE**A. HYDROGEOLOGY**

Describe geologic formations and aquifer(s) of concern. Include interconnections, confining layers, discontinuities, composition and permeability.

The facility is situated near the western margin of the Hackensack Meadows. The uppermost soil profile consists of peat and meadow mat mixed with fine-grained sediments. Underlying this organic layer are deposits of silt associated with sedimentation in glacial Lake Hackensack that occupied the region 10,000 to 15,000 years ago. Fine-grained lake deposits are underlain by glacial till composed of sand and gravel. Bedrock, underlying unconsolidated deposits consists of shale and sandstone of the Triassic-Jurassic age Passaic Formation. The bedrock is exposed approximately 0.5 mile to the west of the site and slopes steeply eastward toward the Hackensack River Valley. (Attachment L)

Depth to aquifer of concern: 3 to 10 feet

Depth from lowest point of waste disposal/storage to highest seasonal level of the saturated zone of the aquifer of concern:

Ground water is not used as a resource within a 4-mile radius of the facility.

Permeability of the least permeable layer between the ground surface and the aquifer of concern:

Ground water is not used as a resource within a 4-mile radius of the facility.

Thickness of aquifer: 6,000 to 7,000 feet

Direction of ground water flow: southeasterly with a variance to the northeast near the drainage swale

Karst (Y/N): N

Wellhead Protection Area (Y/N): N Distance: NA

B. MONITORING WELL INFORMATION

<u>Well No.</u>	<u>Depth</u>	<u>Formation</u>	<u>Location</u>
MW-2R	12 feet	Passaic	closed
MW-3R	12 feet	Passaic	closed
MW-4R	12 feet	Passaic	closed
MW-1	14 feet	Passaic	closed
MW-2	13 feet	Passaic	closed
MW-3	14 feet	Passaic	closed
MW-4	13 feet	Passaic	closed

(Attachment E)

Identify the upgradient well(s): MW-1

Briefly discuss why the monitoring wells were installed and describe contaminants identified in the monitoring wells. Include Well No., sampling date, sampling agency or company, contaminant levels and cleanup standards.

Monitoring wells MW-1, MW-2, MW-3 and MW-4 were installed from January 15 to January 20, 1988 by Geraghty & Miller of Hackensack, New Jersey as part of a ground water investigation initiated pursuant to ECRA. The wells ranged in depth from 13 to 14 feet and were placed at upgradient (MW-1) and downgradient (MW-2, MW-3, MW-4) locations. The initial round of ground water sampling occurred on February 9, 1988. The samples were analyzed for volatile organic compounds, base/neutral compounds and total petroleum hydrocarbons by Envirotech Research of Edison, New Jersey. The following table summarizes the results:

<u>WELL #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppb)</u>	<u>GWQC (ppb)</u>
MW-2	* 1,2-dichloroethane	7.3	0.30
	trans-1,2-dichloroethene	7.7	100.0
	* vinyl chloride	23.0	0.08
MW-3	* vinyl chloride	25.0	0.08
MW-4	total xylene	12.0	1,000.0

* - contaminants detected above the GWQC
 GWQC - Ground Water Quality Criteria
 ppb - part per billion

A second round of ground water sampling was conducted on August 18, 1988 by Geraghty & Miller. Similar analytical results indicated levels above the current Ground Water Quality Criteria for vinyl chloride in the downgradient wells. (refer to Attachment F for a summarized table of the laboratory results)

Wells MW-2, MW-3 and MW-4 were destroyed by on-site activity. Three replacement wells designated as MW-2R, MW-3R and MW-4R were installed on December 13 and 14, 1990. These wells were resampled along with MW-1 on December 31, 1990 and analyzed for volatile organics, base/neutrals and petroleum hydrocarbons. Two targeted volatile organic compounds and five targeted base neutral compounds were identified as estimated values in the downgradient wells, all below the current Ground Water Quality Criteria. (refer to Attachment N for a summarized table of the analytical results)

C. POTABLE WELL INFORMATION

Distance to nearest potable well: >4 miles

Identify all public supply wells within 4 miles of the site:

<u>Water Company</u>	<u>Distance from site (miles)</u>	<u>Depth (feet)</u>	<u>Formation</u>
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There are no public supply wells in service within a 4-mile radius of the facility. (Map 5)

Discuss private potable well use within 4 miles of the site. Include depth, formation and distance, if available.

There are no private potable wells in use within a 4-mile radius of the facility.

Discuss for each aquifer the population utilizing that aquifer for drinking purposes within 4 miles of the site.

<u>Distance from site (miles)</u>	<u>Population/Aquifer</u>
0 - 1/4	0
1/4 - 1/2	0
1/2 - 1	0
1 - 2	0
2 - 3	0
3 - 4	0

Discuss any evidence of contaminated drinking water or wells closed due to contamination. State whether Level 1 or Level 2 contamination is present.

There is no evidence of contaminated drinking water or wells closed due to contamination from the facility.

Identify industrial/irrigational wells within the vicinity of the site. Include depth, formation, distance and direction, if available.

There are four industrial wells (southwest) within a one-mile radius of the facility. These wells range in depth from 500 to 700 feet and extend into the Triassic Brunswick Formation. (Map 5)

D. POTENTIAL

Discuss the potential for ground water contamination, including any other information concerning the ground water contamination route.

Three separate rounds of ground water sampling have indicated contamination with volatile organic and base neutral compounds, some of which are above the NJDEP's Ground Water Quality Criteria (GWQC). With the exception of the third round of sampling, which revealed no contaminants above the GWQC, the concentration of the contaminants increases in the downgradient wells which could be indicative of an on-site release. (Attachments E, F, N)

Soil samples collected from the previously mentioned areas of concern by the NJDEP, Division of Publicly Funded Site Remediation (DPFSR), Office of Site Assessment (OSA), on October 5, 1994 were

analyzed for the Target Analyte List and petroleum hydrocarbons by Industrial Corrosion Management Inc. of Randolph, New Jersey. The sample results revealed levels for some heavy metals such as cadmium, lead and zinc above the NJDEP's Soil Cleanup Criteria. Additional samples collected from an off-site oil spill (source unknown) exhibited levels for similar metals and petroleum hydrocarbons above the Department's Soil Cleanup Criteria. (Attachment X)

PART V: SURFACE WATER ROUTE

A. SURFACE WATER

Does a migration pathway to surface water exist (Y/N): Y

Flood plain: 100 year Slope: <3%

(Map 7)

Does contaminated ground water discharge to surface water (Y/N):

Confirmed ground water contamination and the close proximity of nearby drainage swales increase the likelihood that contaminants with a high ground water mobility are discharged to the surface water. Surface water samples collected on February 25, 1988 indicated levels for trichloroethene above the Department's current Surface Water Quality Criteria. (Attachments N and X)

Identify known or potentially contaminated surface water bodies. Follow the pathway of the surface water and indicate all adjoining bodies of water along a route of 15 stream miles.

<u>Surface Water Body</u>	<u>Distance from site</u>	<u>Flow(cfs)</u>	<u>Usage(s)</u>
Unnamed ditch	adjacent	<10	storm sewer runoff
Dead Horse Creek	500 feet	<10	storm sewer runoff
Frank's Creek	0.2 mile	<10	storm sewer runoff
Passaic River	1.0 mile	650	recreation, fishing
Hackensack River	2.5 miles	100-1,000	recreation, fishing

(Map 6, Attachment V)

Identify drinking water intakes within 15 miles downstream (or upstream in tidal areas) of the site. For each intake identify the distance from the point of surface water entry, the name of the supplier and population served.

There are no surface water drinking intakes within 15 miles downstream of the site.

Briefly discuss surface water or sediment sampling conducted in relation to the site. Discuss any visual observations of contamination if analytical data is not available (include date of observation). Include surface water body, sampling date, sampling agency or company, contaminant.

Surface water and sediment samples were collected from a drainage swale along the west side of the facility by Geraghty & Miller on February 25, 1988. Upstream (U-3 surface water, SB-U3 sediment), downstream (D-1 surface water, SB-D1 sediment) and midstream (M-2 surface water, SB-M2 sediment) samples were collected and analyzed by Envirotech Research, Inc. for volatile organic compounds (VOCs) +15, base neutral compounds (B/N) +15 and total petroleum hydrocarbons (TPHCs). (Attachment E)

No VOCs were found above the detection limits for samples M-2 and U-3. Sample D-1 (downstream) exhibited trichloroethene and trans-1,2-dichloroethene in concentrations of 60.3 ppb and 38 ppb, respectively. No B/N compounds were found in concentrations above the detection limit in any of the surface water samples. (Attachment E)

Volatile organic compounds were detected in all three sediment samples ranging from 101 to 153 ppb with the highest total concentration found upstream (SB-U3). Base neutral compounds were also detected in all three sediment samples as well as TPHCs ranging from 43 to 797 ppm. Contaminants such as benzo(a)pyrene, benzo(a)anthracene, acenaphthene, phenanthrene, anthracene, fluoranthene, pyrene and chrysene exceeded the Sediment Quality Criteria (SQC) with the highest concentrations occurring in the midstream and downstream samples. No contaminants exceeded the SQC in the upstream sample. (Attachment E)

A second round of sediment samples were collected from the drainage swale by the NJDEP, DPFSR, OSA on October 5, 1994. Two samples were collected in the vicinity of the site's surface water runoff route and analyzed for the Target Analyte List and petroleum hydrocarbons by Industrial Corrosion Management of Randolph, New Jersey. The sample results revealed lead, zinc, nickel and chromium above the Department's Sediment Quality Criteria. Total petroleum hydrocarbons ranged from 1,600 ppm to 4,200 ppm. (Attachment X)

Discuss the potential for surface water contamination, include any additional information concerning the surface water route.

Sediment samples collected from the nearby Dead Horse Creek as part of an investigation conducted by a neighboring facility, revealed levels of metals such as copper, lead, nickel, zinc and chromium above the NJDEP's Sediment Quality Criteria (SQC). These metals were also detected above the SQC in the samples collected from the drainage swale adjacent to the site. It is unclear whether this is indicative of an upstream or on-site source of contamination as no outlet connecting the two water courses is visible. (Attachment L)

B. SENSITIVE ENVIRONMENTS

Identify all sensitive environments, including wetlands, along the 15 stream-mile pathway from the site:

<u>Environment Type</u>	<u>Surface water Body</u>	<u>Flow (cfs)</u>	<u>Distance from site</u>	<u>Wetland Frontage</u>
Palustrine Emergent Wetlands	Passaic River	650	0.2	200 feet
Palustrine Open Water Wetlands	Passaic River	650	0.5	500 feet
Estuarine Intertidal Flat	Passaic River	650	3.0	2,500 ft.

(Map 6, Attachment V)

PART VI: AIR ROUTE

Discuss observed or potential air release.

There is no potential for an air release to occur as a result of current site operations.

Populations that reside within 4 miles of the site.

<u>Distance (miles)</u>	<u>Population</u>
0 - 1/4	0
1/4 - 1/2	1,870
1/2 - 1	3,940 (Attachment W)
1 - 2	31,265
2 - 3	51,120
3 - 4	<u>79,760</u>

total 167,955

Identify sensitive environments and wetland acreage within 4 miles of the site.

<u>Distance</u>	<u>Type of environment</u>	<u>Wetland acreage</u>
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The facility does not present an air threat.

Identify all land resources (commercial agriculture, silviculture or recreation) within 4 miles of the site.

The facility does not present an air threat.

PART VII: SOIL EXPOSURE

Describe soil type. Include soil series, makeup of the soil and permeability of the soil.

Soil boring logs prepared by Geraghty & Miller as part of the monitoring well installation revealed a fill layer consisting of grayish-brown to reddish-brown fine to coarse sand with some silt, gravel and debris consisting of wood, bricks, concrete, metal, coal and ash at depths ranging from ground level to 6 feet below grade. A layer of fine sediments, clay and silt underlies the fill material. A reddish-brown to gray, fine to coarse sand with some silt, traces of clay and gravel can be found from 7 to 14 feet below grade. (Attachment E)

Briefly discuss contaminants identified in the soil. Include sampling date, sampling agency or company, sample locations, depth and contaminant level. Determine if the sample was collected on a residential property, school, daycare center, workplace, terrestrial sensitive environment or resource. State whether Level 1 or Level 2 contamination is present.

On August 5, 1986, seventeen soil samples were collected by Geraghty & Miller from the four previously mentioned areas of concern. The samples were collected at 0.5 foot intervals at depths ranging from 6 to 24 inches and analyzed by Envirotech Research Inc., for total petroleum hydrocarbons (TPHC), base/neutral compounds (B/N) and volatile organic compounds (VOC). Contaminants such as toluene, ethylbenzene, anthracene, fluoroanthene, chrysene, benzo(a)anthracene and bis(2-ethylhexyl)phthalate were detected below the NJDEP's Soil Cleanup Criteria near Area C. Petroleum hydrocarbons as high as 18,200 ppm were detected above the current Soil Cleanup Criteria. (Attachment C)

In September 1989, 75 cubic yards of soil was excavated from the four previously mentioned areas of concern. Twenty-nine soil samples were collected by Geraghty and Miller from the sidewalls approximately 1 foot from the bottom of the excavations due to the infiltration of ground water. Based on photoionization detector readings, all of the samples were analyzed for TPHCs and twenty-five percent of the samples were analyzed for VOCs and B/Ns. The following is a summary of the sample results:

Area A - Analysis for VOC and B/N compounds were not performed for A-1, 2, 3, 4, 6 and 7. The highest TPHC reading was 1,670 ppm. Base neutral compounds such as benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene and indeno(1,2,3-c,d)pyrene were detected slightly above the NJDEP's Soil Cleanup Criteria.

Area B - Analysis for VOCs were not performed for B-2, 3, 5, 6, 7 and 8. B/Ns were not run for B-2, 3, 5, 6 and 7. Volatile organics such as toluene and xylene were detected below the Soil Cleanup Criteria in samples B-1 and B-4. Base neutrals were detected at estimated values only. The highest TPHC value was at 15,200 ppm.

Area C - Analysis for VOCs were not performed for C-1, 3, 4, 5, 7 and 8. Analysis for B/Ns were not performed for C-1, 3, 4, 5, 7 and 8. No volatile organics were detected above the Soil Cleanup Criteria. The only base neutral compound detected slightly above the Soil Cleanup Criteria was benzo(b)fluoranthene at 1.0 ppm. The highest TPHC value was at 9,540 ppm.

Area D - Analysis for VOCs were performed only for D-5, showing no detectable levels above the Soil Cleanup Criteria. The highest TPHC value was at 13,200 ppm.

(Attachment I)

On December 12, 13 and 14, 1990 26 additional soil samples were collected by Geraghty & Miller. Post-excavation samples were collected from the sidewalls of each area of concern at depths ranging from 0 to 6 inches and 18 to 24 inches below grade. No samples were collected at the base of the excavations due to the elevated ground water table. The samples were analyzed by Envirotech Research Inc., for base/neutral compounds and TPHCs at the 0 to 6 inch interval and volatile organic compounds at the 18 to 24 inch interval. Soil samples were also collected from distances of 6 to 15 feet around the perimeters of the respective excavations in order to delineate the horizontal extent of TPHC contamination. The following is a summary of the sample results:

- Area A - Base neutral compounds were detected at estimated values below the current Soil Cleanup Criteria. The highest TPHC value within the excavation was at 4,510 ppm. TPHC levels from samples collected around the perimeter of the excavation ranged from 224 to 2,200 ppm.
- Area B - No VOC compounds were detected above the current Soil Cleanup Criteria. Benzo(b)fluoranthene was the only base neutral compound detected above the SCC. TPHCs were detected as high as 10,700 ppm within the excavation and 2,760 ppm around the perimeter.
- Area C - Base/neutral compounds such as benzo(a)pyrene, benzo(a)anthracene, indeno(1,2,3-c,d)pyrene and benzo(b)fluoranthene were detected above the current Soil Cleanup Criteria at 9.4, 6.8, 8.3 and 11.0 ppm respectively. TPHCs were detected as high as 19,900 ppm within the excavation and 1,310 ppm around the perimeter.
- Area D - Base/neutral compounds such as benzo(a)pyrene, benzo(a)anthracene, indeno(1,2,3-c,d)pyrene and benzo(b)fluoranthene were detected above the current Soil Cleanup Criteria at 1.7, 2.2, 1.8 and 4.1 ppm respectively. TPHCs were detected as high as 1,580 ppm within the excavation and 10,900 ppm around the perimeter.

(Attachment N)

Seven soil samples were collected on site by the NJDEP, DPFSR, OSA on October 5, 1994 and analyzed for the Target Analyte List and petroleum hydrocarbons by Industrial Corrosion Management. The samples were collected at depths ranging from 6 inches to 4 feet along the fence line adjacent to the drainage swale in order to determine the impact of surface water runoff on that body of water. Cadmium, lead and zinc were detected at sample location S-3 (near Area A) above the Department's Soil Cleanup Criteria at 22.6 ppm, 1,100 ppm and 1,510 ppm, respectively. No other significant metals contamination was detected on site. Four additional samples were collected, two from an off-site oil spill and two from sediments along the drainage swale. Petroleum hydrocarbons [S-8 (19,000 ppm)] and metals such as arsenic, barium, cadmium, lead and zinc were detected above the Department's Soil Cleanup Criteria in the vicinity of the off-site oil spill. Sediment samples collected from the drainage swale exceeded the Department's Sediment Quality Criteria for lead, zinc, chromium and nickel. (Attachment X)

Total area of surficial contamination (square feet): not determined

If no soil sampling has been conducted, discuss areas of potentially contaminated soil, areas that are visually contaminated or results from soil gas surveys.

No areas of visible soil contamination were observed during a Pre-Sampling Assessment conducted by the NJDEP on December 16, 1993. A drainage swale located along the eastern property boundary often exhibits a dark petroleum stain from an unknown source during periods of heavy rainfall. Extensive soil sampling conducted as part of an ECRA investigation indicates contamination with base/neutral compounds and TPHCs above the NJDEP's Soil Cleanup Criteria. Samples collected from four designated areas of concern indicate that the site may be a source of contamination. As a result, 75 cubic yards of contaminated soil was excavated from the areas of concern on site. Although some of the soil was disposed of, one pile remains on site and is currently pending disposal. (Attachment X)

Determine if any commercial agriculture, silviculture, livestock production or grazing are present on or within 200 feet of the site.

There are no commercial agriculture, silviculture, livestock production or grazing areas within 200 feet of the site.

Number of people that occupy residences or attend school or day care on or within 200 feet of the site: 0

Number of workers on or within 200 feet of the site: 50

Does a subsurface gas threat exist? (Y/N): no

If so, discuss the threat (homes or occupied buildings).

The facility does not pose a subsurface gas threat.

PART VIII: DIRECT CONTACT

Describe accessibility of the site (fencing, site security, evidence of unauthorized entry).

The site is completely fenced and locked at the close of each business day. Evidence of unauthorized entry, theft and vandalism are frequently reported for this and neighboring facilities.

Number of on-site employees: 10

PART IX: FIRE AND EXPLOSION

Discuss all incidents on site which have involved a fire or explosion. Indicate the date of the incident and the materials involved.

A large brush fire was started by juveniles to the east and south of the facility on August 1, 1990. The fire, which predominantly burned along the adjacent railroad trestle, did not impact the site. (Attachment U)

Discuss site conditions which indicate a potential exists for fire or explosion (reactivity, incompatibility, ignitability, storage practices, container condition).

The only flammable material used and stored on site is propane gas which is kept in an open shed adjacent to the facility's main garage.

PART X: ADDITIONAL CONSIDERATIONS

Discuss evidence of wildlife or vegetation that has been or could be potentially impacted by on-site operations. Include areas exhibiting stressed vegetation or damage to wildlife.

Petroleum-stained soil and vegetation along a drainage swale to the east of the facility is an ongoing problem during periods of flooding. The source of the stains is unknown. (Attachment L)

Determine if a contaminant on site displays bioaccumulative properties. Name all bioaccumulative substances that may impact the food chain.

Contaminants detected on site which exhibit bioaccumulative properties include chromium, cadmium, lead and zinc.

Discuss observed or potential damage to off-site property. Consider migration routes from the site to an off-site property via soil, air or runoff. Do not count groundwater contamination to an off-site well as damage to off-site property.

Petroleum-stained soil along a drainage swale to the east of the facility is an ongoing problem during periods of flooding. The source of the stains is unknown. The Dead Horse Creek which flows downstream from the site is known to be impacted by a variety of contaminants, in particular heavy metals. (Attachment L)

PART XI: PREVIOUS OR ONGOING REMEDIAL ACTIONS

Discuss for each media all previous and ongoing remedial activities at the site. Include why initiated, type of action, date and present status.

An ECRA review was initiated due to the cessation of operations by Guignon and Green in 1985. As a result, Guignon and Green retained Geraghty & Miller Inc. to prepare and implement an initial soil quality assessment and ground water quality survey. Four areas of concern were identified during the investigation. Approximately 7,000 gallons of waste water accumulated from ground water seepage was removed from all four of the excavated areas and manifested to Dupont's Deepwater, New Jersey facility. Approximately 75 cubic yards of contaminated soil from these areas of concern was then excavated for disposal. A Sampling Plan Addendum was submitted in June 1991 but the plan was never initiated. The case has since been considered ECRA recalcitrant and was subsequently transferred to the Office of Site Assessment for further investigation. To date, one pile of excavated soil remains on site. (Attachment L)

PART XII: ENFORCEMENT ACTIONS

1. **Type of enforcement activity:** Notice of Violation
Issuing agent: NJDEP, Northern Region Bureau of Enforcement
Date: August 20, 1990
Description of violation: The placement of fill within freshwater wetlands. (Attachment Q)

Follow-up activity: There was no follow-up activity on record.

2. **Type of enforcement activity:** Notice of Violation
Issuing agent: NJDEP, Division of Waste Management
Date: August 3, 1990
Description of violation: The discharge of a hazardous substance and failure to notify the Department of a hazardous substance discharge. (Attachment P)

Follow-up activity: Guignon and Green submitted a letter on August 28, 1990, contesting its involvement with the oil spill.

PART XIII: SAMPLING DATA

1. a. Sampling date: August 5, 1986
- b. Sampled by: Geraghty & Miller Inc.
7 Atlantic Street
Hackensack, New Jersey 07601
- c. Samples: seventeen (17) soil
- d. Laboratory: General Testing Corporation
85 Trinity Place
Hackensack, New Jersey 07601
- Certification No. 02317
- e. Parameters: base neutral compounds, volatile
organic compounds and petroleum
hydrocarbons
- f. Sample description: seventeen soil samples were collected
to a maximum depth of 2 feet in the
previously mentioned areas of concern.
- g. Contaminants detected:

<u>SAMPLE #</u>	<u>CONTAMINANT DETECTED</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
1	petroleum hydrocarbons	98.0	10,000.0
2	petroleum hydrocarbons	303.0	10,000.0
3	petroleum hydrocarbons	383.0	10,000.0
4	* petroleum hydrocarbons	14,800.0	10,000.0
5	* petroleum hydrocarbons	16,800.0	10,000.0
6	* petroleum hydrocarbons	18,200.0	10,000.0
	toluene	0.46	1,000.0
	ethylbenzene	15.0	1,000.0
	anthracene	12.0	10,000.0
	fluoroanthene	0.72	2,300.0
	benzo(a)anthracene	0.22	0.9
	bis(2)ethylhexylphthalate	1.2	49.0
	chrysene	0.37	9.0
7	petroleum hydrocarbons	720.0	10,000.0

<u>SAMPLE #</u>	<u>CONTAMINANT DETECTED</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
8	petroleum hydrocarbons	186.0	10,000.0
10	petroleum hydrocarbons	9,290.0	10,000.0
11	petroleum hydrocarbons	440.0	10,000.0
12	petroleum hydrocarbons	4,010.0	10,000.0
13	petroleum hydrocarbons	7,660.0	10,000.0
14	petroleum hydrocarbons	869.0	10,000.0
15	petroleum hydrocarbons	1,190.0	10,000.0
16	petroleum hydrocarbons	3,200.0	10,000.0
17	petroleum hydrocarbons	748.0	10,000.0
	toluene	1.4	1,000.0

h. QA/QC:

The QA/QC was performed by Compuchem Laboratories of 3306 Chapel Hill/Nelson Highway, Research Triangle Park, North Carolina 27709-4998

i. File Location:

a quality control summary follows the sample data package in Attachments C#

2. a. Sampling date:

January 14, 1988 (soil)
 February 9, 1988 (ground water)
 February 25, 1988 (sediment, surface water)

b. Sampled by:

Geraghty & Miller Inc.
 7 Atlantic Street
 Hackensack, New Jersey 07601

c. Samples:

three (3) surface water
 three (3) sediment
 five (5) ground water
 two (2) soil

d. Laboratory:

Envirotech Research Inc.
 777 New Durham Road
 Edison, New Jersey 08817

Certification No. 12543

e. Parameters: volatile organic compounds, base/neutral extractables, TPHC

f. Sample description: ground water was collected from monitoring wells MW-1, MW-2, MW-3, MW-4 and MW-5 (duplicate of MW-4)

surface water and sediment samples were collected upstream, downstream and midstream along the adjacent drainage swale:

U-3 - surface water upstream
D-1 - surface water downstream
M-2 - surface water midstream
SB-U3 - sediment upstream
SB-D1 - sediment downstream
SB-M2 - sediment midstream

soil samples were collected from boring 101 and monitoring well MW-3 at depths of 0 to 6 inches and 12 to 18 inches.

g. Contaminants detected:

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppb)</u>	<u>GWQC (ppb)</u>
MW-2	* 1,2-dichloroethane	7.3	0.3
	trans-1,2-dichloroethene	7.7	100.0
	* vinyl chloride	23.0	0.08
MW-3	* vinyl chloride	25.0	0.08
MW-4	xylene	12.0	40.0
MW-5	total xylene	10.0	40.0
	* bis(2-ethylhexyl)phthalate	41.9	3.0
		<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
MW-3	toluene	0.550	1,000.0
(soil)	total xylene	0.048	410.0
	naphthalene	0.360	230.0
	fluorene	0.330	2,300.0
	phenanthrene	1.80	NS
	anthracene	0.360	10,000.0
	fluoranthene	1.90	2,300.0
	pyrene	1.70	1,700.0
	chrysene	0.880	9.0

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
MW-3 (soil)	benzo(a)anthracene	0.820	0.9
	benzo(b)fluoranthene	0.760	0.9
	* benzo(a)pyrene	0.800	0.66
	Indeno(1,2,3-c,d)pyrene	0.470	0.9
	benzo(g,h,i)perylene	0.430	NS
	TPHC	110.0	10,000.0
SB-101	phenanthrene	0.570	NS
	fluoranthene	0.930	2,300.0
	pyrene	0.900	1,700.0
	bis(2-ethylhexyl)phthalate	0.200	49.0
	chrysene	0.510	9.0
	benzo(a)anthracene	0.410	0.9
	* benzo(b)fluoranthene	1.0	0.9
	benzo(a)pyrene	0.4	0.66
	indeno(1,2,3-c,d)pyrene	0.34	0.9
	benzo(g,h,i)perylene	0.33	NS
		<u>CONCENTRATION (ppb)</u>	<u>SWOC (ppb)</u>
D-1	trans-1,2-dichloroethene	38.0	592.0
	* trichloroethene	60.3	1.09
		<u>CONCENTRATION (ppb)</u>	<u>SQC (ppb)</u>
SB-D1	trans-1,2-dichloroethene	31.0	NS
	methylene chloride	31.0	NS
	trichloroethene	39.0	NS
	1,4-dichlorobenzene	700.0	NS
	naphthalene	2,100.0	2,100
	* acenaphthene	1,500.0	650
	fluorene	3,900.0	NS
	* phenanthrene	12,000.0	1,380
	* anthracene	28,900.0	960
	dibutyl phthalate	1,000.0	NS
	* fluoranthene	12,000.0	3,600
	* pyrene	10,000.0	2,500
	bis(2-ethylhexyl)phthalate	800.0	NS
	* chrysene	5,000.0	2,800
	* benzo(a)anthracene	3,300.0	1,600
	benzo(b)fluoranthene	6,000.0	NS
	benzo(a)pyrene	2,300.0	2,500
	indeno(1,2,3-c,d)pyrene	1,000.0	NS
	benzo(g,h,i)perylene	1,000.0	NS
	TPHC	797,000.0	NS

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppb)</u>	<u>SQC (ppb)</u>
SB-M2	trans-1,2-dichloroethene	67.0	NS
	fluorene	5,100.0	NS
	* phenanthrene	19,500.0	1,380
	* anthracene	17,600.0	960
	* fluoranthene	10,900.0	3,600
	* pyrene	8,200.0	2,200
	bis(2-ethylhexyl)phthalate	1,800.0	NS
	* chrysene	5,800.0	2,800
	* benzo(a)anthracene	3,900.0	1,600
	benzo(b)fluoranthene	6,600.0	NS
	* benzo(a)pyrene	3,200.0	2,500
	indeno(1,2,3-c,d)pyrene	1,500.0	NS
	benzo(g,h,i)perylene	1,500.0	NS
	TPHC	262,000.0	NS
SB-U3	trans-1,2-dichloroethene	50.0	NS
	methylene chloride	28.0	NS
	trichloroethene	75.0	NS
	phenanthrene	900.0	1,380
	fluoranthene	1,700.0	3,600
	pyrene	1,600.0	2,200
	bis(2-ethylhexyl)phthalate	3,000.0	NS
	chrysene	1,100.0	2,800
	benzo(a)anthracene	800.0	1,600
	benzo(b)fluoranthene	900.0	NS
	benzo(a)pyrene	700.0	2,500
	TPHC	263,000.0	NS

h. QA/QC: The Quality Assurance/Quality Control was conducted by Envirotech Research Inc. of 1095 Amboy Avenue, Edison, New Jersey. The QA/QC Summary Report is located in Attachment E.

i. File location: NJDEP, DPFSR, OSA
300 Horizon Center
Robbinsville, New Jersey

3. a. Sampling date: August 18, 1988

b. Sampled by: Geraghty & Miller Inc.
7 Atlantic Street
Hackensack, New Jersey 07601

c. Samples: four (4) ground water

d. Laboratory: Envirotech Research, Inc.
777 New Durham Road
Edison, New Jersey 08817

Certification No. 12543

e. Parameters: volatile organic compounds, base
neutral extractables, petroleum
hydrocarbons

f. Sample description: MW-1, MW-2, MW-3, MW-4

g. Contaminants detected:

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppb)</u>	<u>GWQC (ppb)</u>
MW-2	trans-1,2-dichloroethene	6.8	100.0
	toluene	9.3	1,000.0
	* vinyl chloride	23.0	0.08
	total xylene	18.0	40.0
	naphthalene	111.0	NS
	TPHCs	4.0	NS
MW-3	* vinyl chloride	56.0	0.08

h. QA/QC: The Quality Control/Quality Assurance
was performed by Envirotech Research,
Inc. of 777 New Durham Road, Edison,
New Jersey. The QA/QC Summary Report is
located in Attachment F.

i. File location: NJDEP, DPFSR, OSA
300 Horizon Center
Robbinsville, New Jersey

4. a. Sampling date: September 28, 1989

b. Sampled by: Geraghty & Miller, Inc.
7 Atlantic Street
Hackensack, New Jersey 07601

c. Samples: twenty-nine (29) soil

d. Laboratory: Envirotech Research, Inc.
777 New Durham Road
Edison, New Jersey 08817

Certification No. 12543

e. Parameters: volatile organic compounds, base
neutral extractables and petroleum
hydrocarbons

f. Sample description: eight (8) samples from Area A
 eight (8) samples from Area B
 eight (8) samples from Area C
 five (5) samples from Area D

g. Contaminants detected:

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
A-1	TPHC	338.0	10,000.0
A-2	TPHC	1,670.0	10,000.0
A-3	TPHC	43.0	10,000.0
A-4	TPHC	47.0	10,000.0
A-6	TPHC	424.0	10,000.0
A-7	TPHC	818.0	10,000.0
A-8	phenanthrene	2.69	NS
	anthracene	0.687	10,000.0
	fluoranthene	2.86	2,300.0
	pyrene	3.04	1,700.0
	chrysene	1.9	9.0
	* benzo(a)anthracene	1.73	0.9
	* benzo(b)fluoranthene	3.16	0.9
	* benzo(a)pyrene	1.7	0.66
	* indeno(1,2,3-c,d)pyrene	1.0	0.9
	benzo(g,h,i)perylene	0.970	NS
	TPHC	217.0	10,000.0
B-1	toluene	2.2	1,000.0
	TPHC	1,760.0	10,000.0
B-2	TPHC	8,780.0	10,000.0
B-3	TPHC	3,500.0	10,000.0
B-4	toluene	11.0	1,000.0
	total xylene	8.3	410.0
	* TPHC	15,200.0	10,000.0
B-5	TPHC	2,920.0	10,000.0
B-6	TPHC	4,560.0	10,000.0
B-7	TPHC	4,580.0	10,000.0
B-8	TPHC	6,040.0	10,000.0

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
C-1	TPHC	370.0	10,000.0
C-2	trichlorofluoromethane	0.850	NS
	phenanthrene	0.839	NS
	fluoranthene	1.23	2,300.0
	pyrene	0.904	1,700.0
	chrysene	0.543	9.0
	benzo(a)anthracene	0.466	0.9
	* benzo(b)fluoranthene	1.0	0.9
	benzo(a)pyrene	0.482	0.66
	TPHC	60.0	10,000.0
C-3	TPHC	63.0	10,000.0
C-4	TPHC	1,660.0	10,000.0
C-5	TPHC	9,540.0	10,000.0
C-6	TPHC	297.0	10,000.0
C-7	TPHC	288.0	10,000.0
C-8	TPHC	7,940.0	10,000.0
D-1	TPHC	2,310.0	10,000.0
D-2	* TPHC	13,200.0	10,000.0
D-3	TPHC	1,790.0	10,000.0
D-4	TPHC	434.0	10,000.0
D-5	TPHC	240.0	10,000.0

h. QA/QC: The Quality Control/Quality Assurance Report was not included with the sampling data

i. File location: Attachment I9

5. a. Sampling date: December 12, 13, 14 and 31, 1990

b. Sampled by: Geraghty & Miller, Inc.
7 Atlantic Street
Hackensack, New Jersey 07601

c. Samples: twenty-six (26) soil
three (3) ground water

d. Laboratory: Envirotech Research, Inc.
777 New Durham Road
Edison, New Jersey 08817

Certification No. 12543

e. Parameters: volatile organic compounds, base neutral
extractables and petroleum hydrocarbons

f. Sample description: (4) Area A soil
(8) Area B soil
(8) Area C soil
(6) Area D soil
(1) MW-2R ground water
(1) MW-3R ground water
(1) MW-4R ground water

g. Contaminants detected:

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
A-9	TPHC	4,510.0	10,000.0
A-10	TPHC	2,470.0	10,000.0
B-9	fluoranthene	2.8	2,300.0
	pyrene	4.7	1,700.0
	* benzo(b)fluoranthene	2.2	0.9
	TPHC	950.0	10,000.0
B-10	phenanthrene	4.4	NS
	fluoranthene	5.8	2,300.0
	pyrene	4.7	1,700.0
	* benzo(b)fluoranthene	4.2	0.9
	TPHC	3,310.0	10,000.0
B-11	* TPHC	10,700.0	10,000.0
B-12	phenanthrene	9.6	NS
	fluoranthene	33.0	2,300.0
	pyrene	20.0	1,700.0
	* chrysene	14.0	9.0
	* benzo(b)fluoranthene	18.0	0.9
	TPHC	790.0	10,000.0
C-9	toluene	17.0	1,000.0
	TPHC	1,310.0	10,000.0

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
C-10	phenanthrene	0.58	NS
	fluoranthene	1.1	2,300.0
	pyrene	1.0	1,700.0
	chrysene	0.66	9.0
	benzo(a)anthracene	0.56	0.9
	* benzo(b)fluoranthene	0.96	0.9
	* benzo(a)pyrene	0.78	0.66
	indeno(1,2,3-c,d)pyrene	0.73	0.9
	benzo(g,h,i)perylene	0.69	NS
	TPHC	278.0	10,000.0
C-11	TPHC	6,310.0	10,000.0
C-12	total xylene	12.0	410.0
	phenanthrene	11.0	NS
	fluoranthene	17.0	2,300.0
	pyrene	19.0	1,700.0
	chrysene	7.8	9.0
	* benzo(a)anthracene	6.8	0.9
	* benzo(b)fluoranthene	11.0	0.9
	* benzo(a)pyrene	9.4	0.66
	* indeno(1,2,3-c,d)pyrene	8.3	0.9
	benzo(g,h,i)perylene	9.8	NS
	* TPHC	19,900.0	10,000.0
C-13	bis(2-ethylhexyl)phthalate	0.4	49.0
	phenanthrene	1.6	NS
	anthracene	0.46	10,000.0
	fluoranthene	2.0	2,300.0
	pyrene	1.7	1,700.0
	butyl benzyl phthalate	0.41	1,100.0
	chrysene	0.98	9.0
	* benzo(a)anthracene	0.91	0.9
	* benzo(b)fluoranthene	1.3	0.9
	* benzo(a)pyrene	0.82	0.66
	indeno(1,2,3-c,d)pyrene	0.52	0.9
	benzo(g,h,i)perylene	0.52	NS
	TPHC	287.0	10,000.0
D-7	TPHC	418.0	10,000.0
D-8	ethyl benzene	0.94	1,000.0
	toluene	29.0	1,000.0
	total xylene	0.92	410.0
	TPHC	1,350.0	10,000.0

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
D-9	phenanthrene	2.2	NS
	fluoranthene	5.0	2,300.0
	pyrene	4.6	1,700.0
	ethyl benzene	0.17	1,000.0
	* benzo(a)anthracene	2.2	0.9
	* benzo(b)fluoranthene	4.1	0.9
	* benzo(a)pyrene	1.7	0.66
	* indeno(1,2,3-c,d)pyrene	1.8	0.9
	benzo(g,h,i)perylene	1.8	NS
	TPHC	1,350.0	10,000.0
SA-1	TPHC	2,200.0	10,000.0
SA-2	TPHC	224.0	10,000.0
SB-3	TPHC	469.0	10,000.0
SB-4	TPHC	47.0	10,000.0
SB-5	TPHC	423.0	10,000.0
SB-6	TPHC	2,760.0	10,000.0
SC-7	TPHC	1,300.0	10,000.0
SC-8	TPHC	151.0	10,000.0
SC-9	TPHC	165.0	10,000.0
SD-10	TPHC	406.0	10,000.0
SD-11	* TPHC	10,900.0	10,000.0
SD-12	TPHC	775.0	10,000.0
		<u>CONCENTRATION (ppb)</u>	<u>GWQC (ppb)</u>
MW-3R	trans-1,2-dichloroethene	5.0	100.0

h. QA/QC: The Quality Control/Quality Assurance was performed by Envirotech Research, Inc. of Edison, New Jersey

i. File location: Attachments N

6. a. Sampling date: October 5, 1994
- b. Sampled by: NJDEP, DPFSR, OSA
300 Horizon Center
Robbinsville, New Jersey
- c. Samples: nine (9) soil
two (2) sediment
- d. Laboratory: Industrial Corrosion Management
1152 Route 10
Randolph, New Jersey
- Certification No. A60084
- e. Parameters: Target Analyte List and petroleum hydrocarbons
- f. Sample description:
- S-1, runoff route (0 to 6") soil
 - S-2, runoff route (6" to 1') soil
 - S-3, runoff route (6" to 4') soil
 - S-4, Area A (1' to 2') soil
 - S-5, Area B (1' to 2') soil
 - S-6, runoff route (1' to 4') soil
 - S-7, runoff route (2' to 4') soil
 - S-8, oil spill (6" to 3') soil
 - S-9, drainage swale (surficial)
sediment
 - S-10, drainage swale (surficial)
sediment
 - S-12, oil spill (6" to 3') soil
- g. Contaminants detected:

<u>SAMPLE #</u>	<u>CONTAMINANT</u>	<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
S-1	TPHC	3,700.0	10,000.0
S-2	* cadmium	2.9	1.0
S-3	* cadmium	22.6	1.0
	* lead	1,100.0	400.0
	* zinc	1,510.0	1,500.0
S-7	TPHC	95.0	10,000.0
S-8	* barium	1,140.0	1.0
	* cadmium (offsite)	8.8	1.0
	* lead	2,790.0	400.0
	* zinc	2,870.0	1,500.0
	* TPHC	19,000.0	10,000.0

			<u>CONCENTRATION (ppm)</u>	<u>SCC (ppm)</u>
S-12	* arsenic	(off site)	46.2	20.0
	* lead		405.0	400.0
	TPHC		1,000.0	10,000.0
<u>SAMPLE #</u>	<u>CONTAMINANT</u>		<u>CONCENTRATION (ppm)</u>	<u>SQC (ppm)</u>
S-9	* lead		264.0	110.0
	* zinc	(off site)	413.0	270.0
	TPHC		1,600.0	NS
S-10	cadmium	(off site)	5.5	9.0
	* chromium		156.0	145.0
	* lead		374.0	110.0
	* nickel		598.0	50.0
	* zinc		774.0	270.0
	TPHC		4,200.0	NS

h. QA/QC: NJDEP, Division of Publicly Funded Site
Remediation, Bureau of Environmental
Measurements and Quality Assurance, Quality
Assurance Section (Attachment Y)

i. File location: Attachments X

* - indicates levels detected above the cleanup standards
TPHC - total petroleum hydrocarbon
SCC - Soil Cleanup Criteria
GWQC - Ground Water Quality Criteria
SWQC - Surface Water Quality Criteria
SQC - Sediment Quality Criteria
NS - no standard
ppm - part per million
ppb - part per billion

PART XIV: CONCLUSIONS AND RECOMMENDATIONS

List each area of concern and state whether further remediation is required.

Ground water contamination with volatile organic compounds such as vinyl chloride has been detected above the NJDEP's Ground Water Quality Criteria. The highest concentrations were detected in the downgradient monitoring wells which could be indicative of an on-site source of contamination. Sediment samples collected from an adjacent drainage swale revealed contamination with base/neutral compounds and heavy metals above the Department's Sediment Cleanup Criteria. The highest concentrations for both parameters were detected in the downstream samples. Volatile organic compounds, however, were detected at the highest concentrations in the upstream sediment samples. Post excavation and perimeter soil

samples collected from four areas of concern which included a former drum storage area, a former tank spill area, a diesel fuel area and former pump house, revealed levels for TPHCs above the Soil Cleanup Criteria (SCC). Base neutral compounds were also detected slightly above the SCC. A letter issued from BEECRA on April 29, 1991 recommended that additional soil samples be collected from all four areas of concern. A Sampling Plan Addendum was submitted by Geraghty & Miller in June 1991 but the plan was never initiated due to the property owner's fear that contamination would reoccur from an off-site source (oil spill). The case was subsequently considered ECRA recalcitrant and was therefore transferred to the Office of Site Assessment for further investigation. Soil and sediment samples collected by the NJDEP on October 5, 1994 and analyzed for Target Analyte List compounds and petroleum hydrocarbons revealed heavy metals above the Soil Cleanup Criteria. Additional samples collected from an off-site oil spill revealed much higher levels for both heavy metals and petroleum hydrocarbons.

Further remediation is required for the remaining pile of excavated soil, the off-site oil spill and Areas A and C as per the Technical Requirements For Site Remediation N.J.A.C. 7:26E Subchapter 3.

No further action under CERCLA is recommended.

Submitted by: David E. Triggs

Title: HSMS II

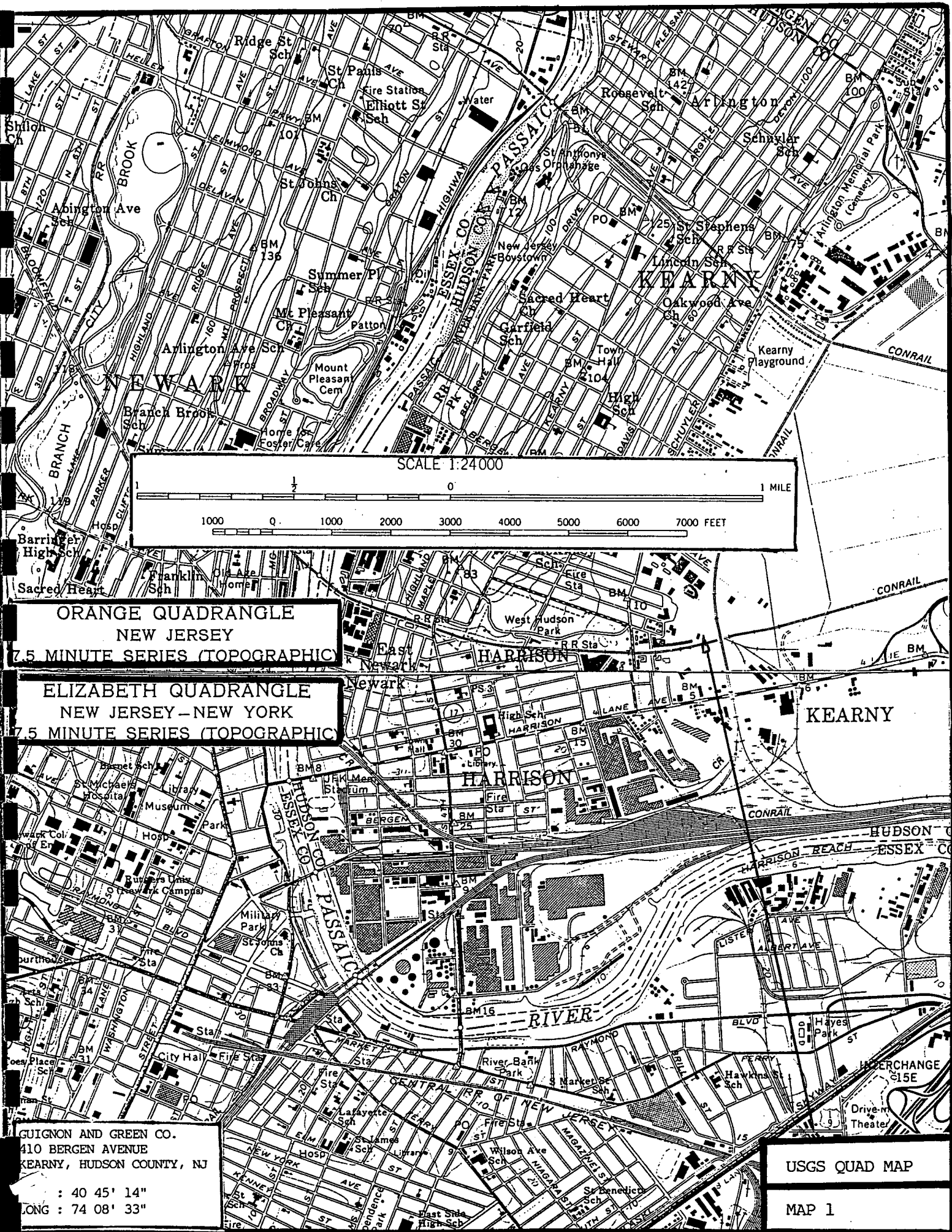
NJDEP, Division of Publicly Funded Site Remediation,
Site Assessment

Date: November 22, 1994

PART XV: POTENTIALLY RESPONSIBLE PARTIES

<u>NAME</u>	<u>OWNER/OPERATOR/ KNOWN DISCHARGER</u>	<u>CURRENT ADDRESS</u>
Guignon and Green	operator	410 Bergen Ave. Lodi, New Jersey
Cali Carting	operator	410 Bergen Ave. Kearny, New Jersey
Continental Turpentine & Rosin Corporation	owner	P.O. Box QQ Cross City, Florida

MAPS



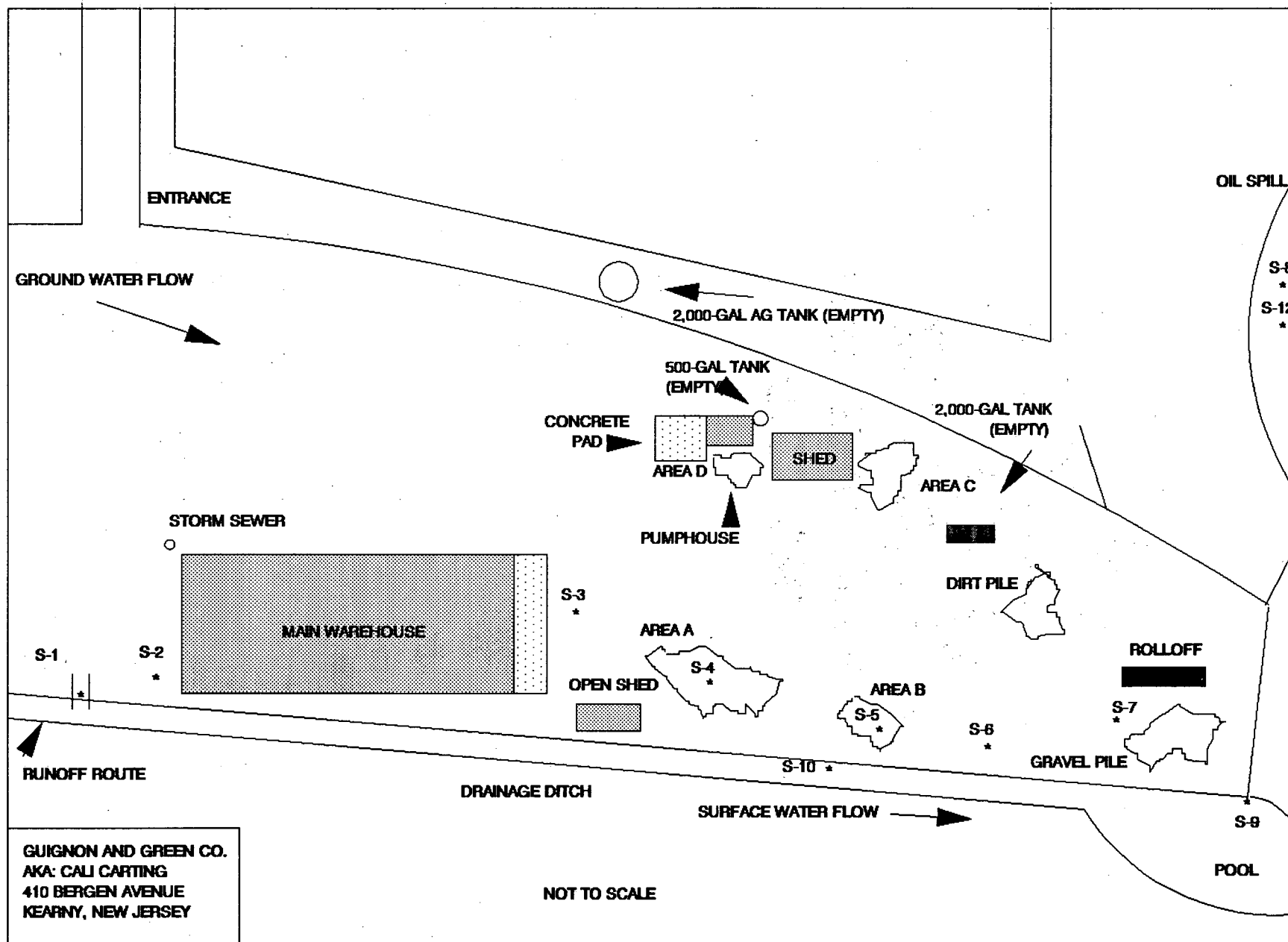
ORANGE QUADRANGLE
NEW JERSEY
7.5 MINUTE SERIES (TOPOGRAPHIC)

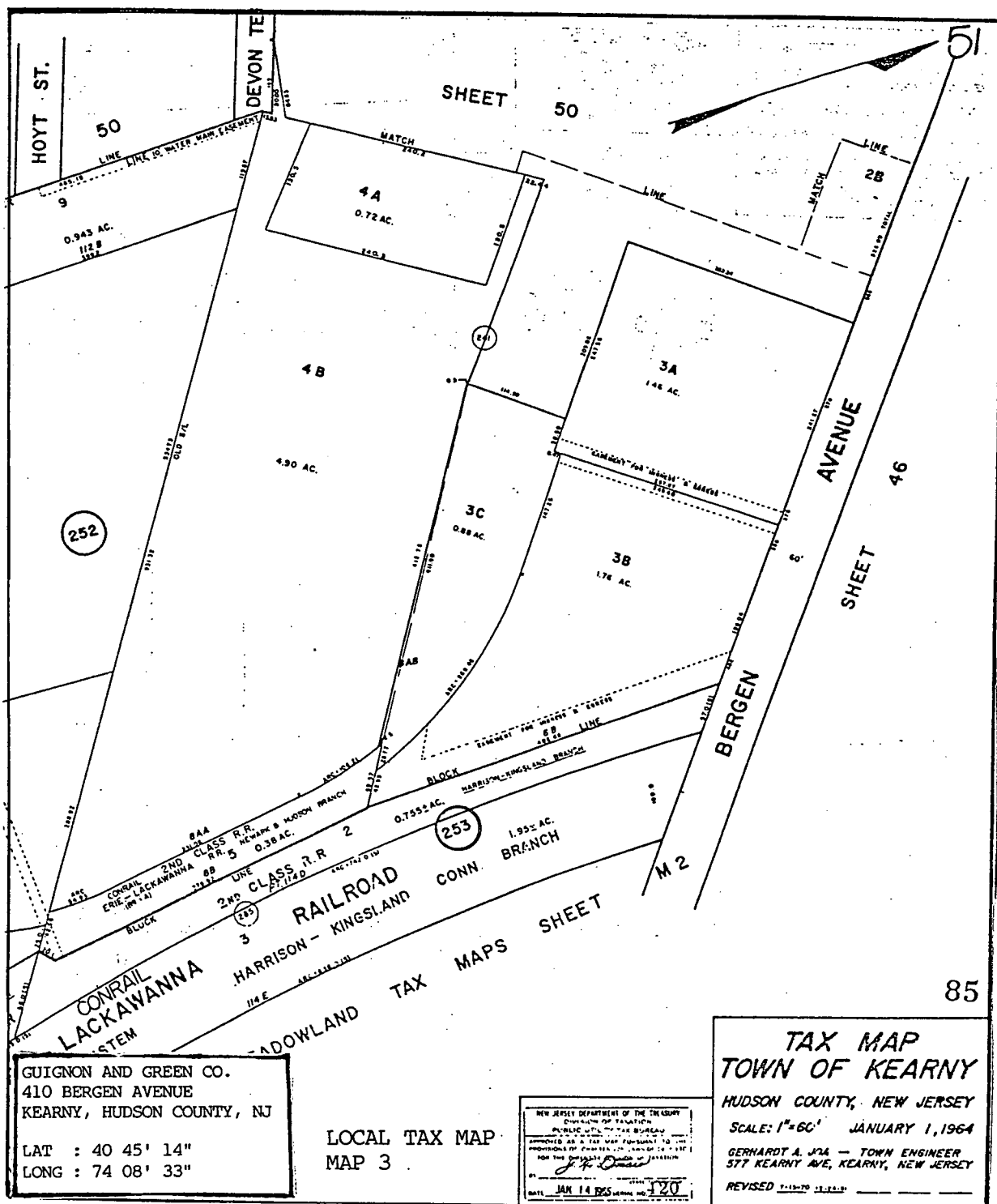
ELIZABETH QUADRANGLE
NEW JERSEY-NEW YORK
7.5 MINUTE SERIES (TOPOGRAPHIC)

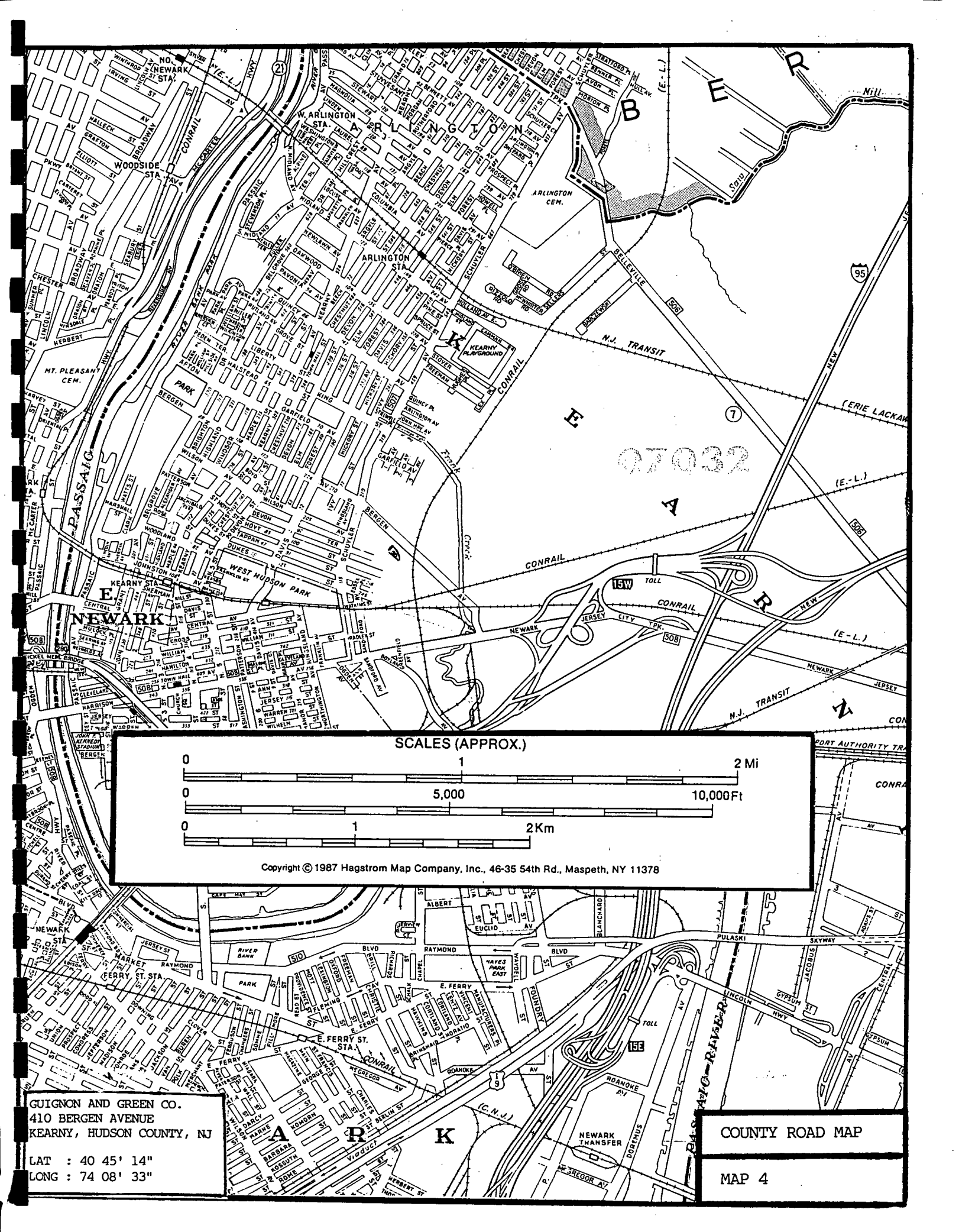
GUIGNON AND GREEN CO.
410 BERGEN AVENUE
KEARNY, HUDSON COUNTY, NJ

LONG : 40 45' 14"
LONG : 74 08' 33"

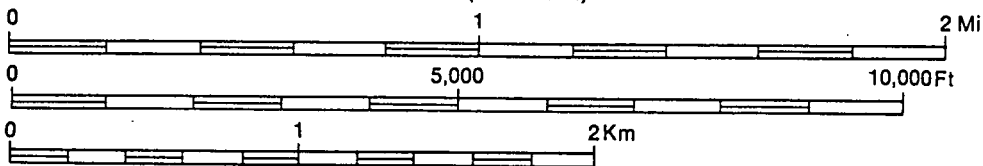
USGS QUAD MAP
MAP 1







SCALES (APPROX.)



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GUIGNON AND GREEN CO.
410 BERGEN AVENUE
KEARNY, HUDSON COUNTY, NJ

LAT : 40 45' 14"
LONG : 74 08' 33"

COUNTY ROAD MAP

MAP 4

SUBJECT TO REVISION

WATER WITHDRAWAL
POINTS WITHIN
5.0 MILES OF:

LATITUDE 404513
LONGITUDE 740824

DRAFT

SCALE: 1:63,360
(1 Inch = 1 Mile)

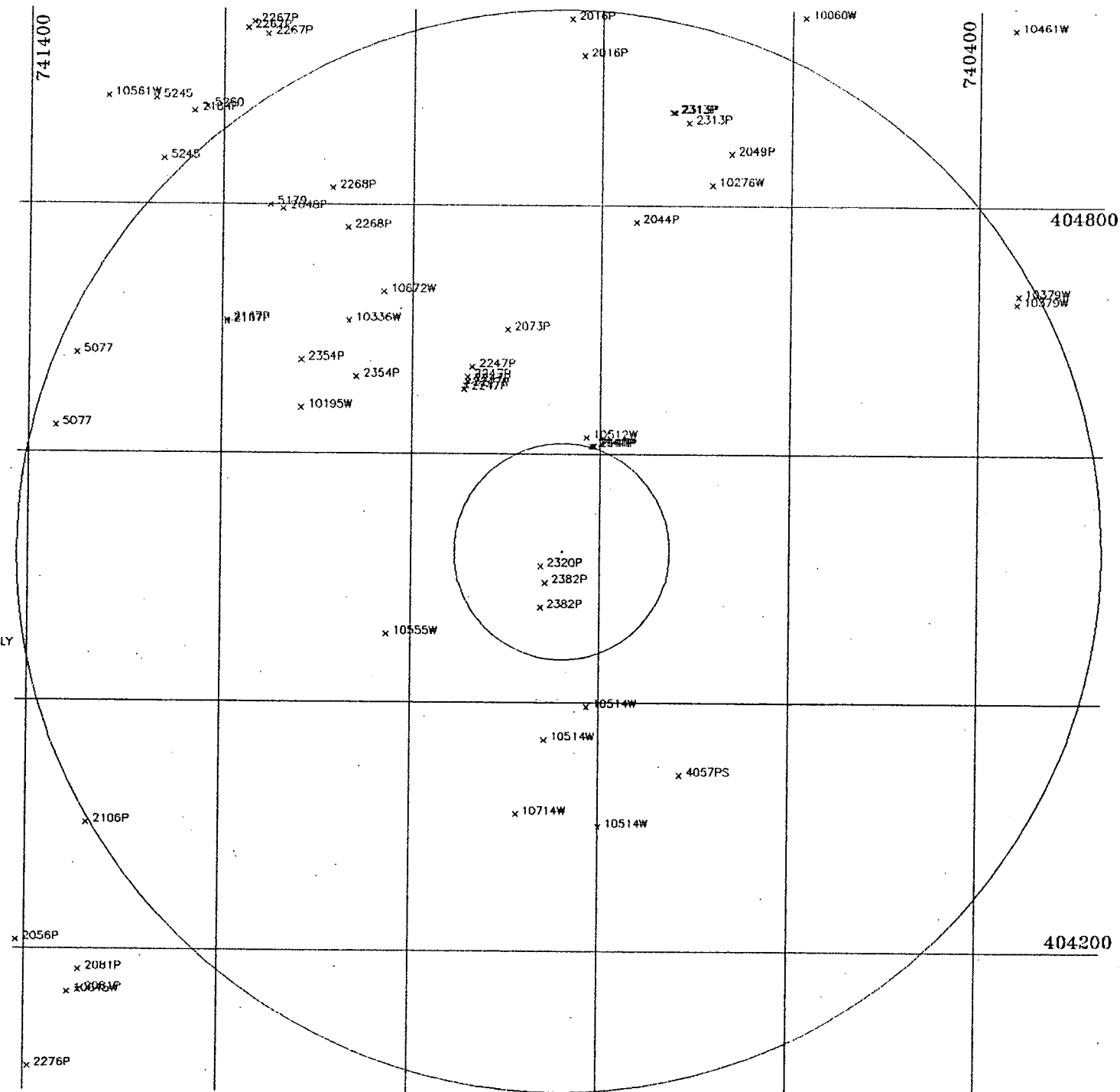
* 100,000 GPD WATER WITHDRAWAL POINTS ONLY
1 MILE AND 5 MILE RADII INDICATED

MAP 5

PLOT PRODUCED BY:
NJDEP
WATER SUPPLY ELEMENT
BUREAU OF WATER ALLOCATION
CN-426
TRENTON, NJ 08625

DATE: 12/08/93

SUBJECT TO REVISION



NUMBER	NAME	SOURCEID	LOCID	LAT	LON	ILACC	DISTANCE	COUNTY	MLN	DEPTH	GED1	GED2	CAPACITY
	FENCO OF LYNDHURST INC.	2603904	5	404840	740705	F	4.1	03	32	352	STRB		185
2320P	KOTOW TRADING CORPORATION	4600182	1	404506	740838	S	0.2	17	07	500	STRB		210
	KOTOW TRADING CORPORATION	2602384	2	404506	740838	S	0.2	17	07	700	STRB		500
2354P	ESSEX COUNTY DEPT. OF PARKS	2604894	2	404645	741110	T	3.0	13	14	450	STRB		180
	ESSEX COUNTY DEPT. OF PARKS	4600216	1	404637	741035	S	2.5	13	14	200	STRB		240
2382P	KARLSHAMMS USA, INC.	2604523	NORTH WELL	404446	740838	S	0.6	17	07	524	STRB		500
	KARLSHAMMS USA, INC.	2604614	SOUTH WELL	404458	740835	F	0.3	17	07	600	STRB		1000
4057PS	RTC PROPERTIES INC	PAESAIK RIVER	INTAKE 1	404325	740708	F	2.3	17	07		SPLMP		1500
5077	ORANGE CITY	2604322	8	404648	741330	S	4.8	13	17	500	STRB		600
	ORANGE CITY	2604444	9	404613	741343	F	4.8	13	17	506	STRB		500
5179	BLOOMFIELD TOWN	2604763	1	404800	741130	T	4.2	13	02	380	STRB		330
5245	MONTCLAIR TOWN	2603667	RAND WL #1	404822	741237	S	5.2	13	13	300	STRB		400
	MONTCLAIR TOWN	2603688	GLENFLD #2	404851	741242	F	5.6	13	13	300	STRB		600
5260	GLEN RIDGE WATER DEPT.	2604827	2	404847	741210	S	5.3	13	08	400	STRB		300

Number of Observations: 69

NUMBER	NAME	SOURCEID	LOCID	LAT	LONG	LIACC	DISTANCE	COUNTY	MUN	DEPTH	GSD1	GSD2	CAPACITY
10060W	DYALESTADT - E. RUTHERFORD BEE	2603920	1	404931	740552	F	5.4	03	12	274	STRB		125
10195W	DOLMETS HOSPITAL	2604654	#1	404622	741110	T	2.8	13	14	334	STRB		150
10376W	BENEDICT-MILLER, INC	2603549	WELL 1	404610	740650	T	3.7	03	32	236	STRB		100
10336W	CLARA MAASS HOSPITAL	2603344	WELL 1	404704	741040	T	2.9	13	01	501	STRB		340
10379W	KEYSTONE METAL FINISHERS, INC.	2602297	2	404717	740335	T	4.9	17	09	150	STRB		130
	KEYSTONE METAL FINISHERS, INC.	2604201	3	404713	740334	T	4.8	17	09	312	STRB		300
10461W	CARLTON-COOKS PLATING CORP.	2604253	WELL 2	404925	740332	T	5.4	03	05	290	STRB		50
10512W	SWANSON CO., INC.	2602717	1	404608	740809	F	1.1	17	07	400	STRB		150
10514W	ROBINSON METALS CORP.	2603408	1	404353	740808	T	1.5	13	14	300	STRB		150
	ROBINSON METALS CORP.	2604993	3	404342	740835	T	1.7	13	14	145			100
	ROBINSON METALS CORP.	2604514	2	4043	7408	T	2.6	13	14	300			100
10555W	NEW JERSEY BELL TELEPHONE	2603173	1	404433	741015		1.9	17	14	215	STRB		80
10561W	HANNE'S	2600118	2	404852	741312	F	5.9	13	13	350	STRB		175
10643W	RONALD MARK ASSOCIATES	2600237	1	404139	741333	T	6.1	39	07	379	STRB		100
10672W	ROCHE DIAGNOSTIC SYSTEM	4600229	1	404718	741018		2.9	13	01	502	STRB		60
	ROCHE DIAGNOSTIC SYSTEM	4600230	2	404718	741018		2.9	13	01	510	STRB		200
10714W	MOTHER FOOD PRODUCTS INC	264345	1	404306	740853	M	2.5	13	14	40.5	STRB		190
2016P	ITT AVIONICS DIVISION	2601834	1	404930	740820	T	4.9	13	14	500	STRB		150
	ITT AVIONICS DIVISION	2601835	2	404930	740820		4.9	13	14	650	STRB		150
	ITT AVIONICS DIVISION	2601905	3	404930	740820		4.9	13	14	500	STRB		150
	ITT AVIONICS DIVISION	2604652	4/SEALED	404912	740812		4.6	13	16	500	STRB		200
2044P	GRAND UNION CO.	4600002		404752	740739	S	3.1	03	39	300	STRB		80
2046P	NATIONAL STARCH & CHEMICAL	2604314	1	404756	741122	T	4.1	13	02	410	STRB		200
2049P	SIKA CORPORATION	2604036	1	404825	740632		4.0	03	32	302	STRB		220
2056P	ATLAS MODEL RAILROAD CO., INC.	2601171		404204	741405		6.1	39	07	138	STRB		200
	ATLAS MODEL RAILROAD CO., INC.	2602079		404204	741405		6.1	39	07	300	STRB		200
2073P	ISP VAN DYK INC.	4600092	1	404700	740900	T	2.1	13	01	352	STRB		100
	ISP VAN DYK INC.	4600093	2	404700	740900	T	2.1	13	01	400	STRB		150
	ISP VAN DYK INC.	2605113	3	404700	740900	T	2.1	13	01	400	STRB		150
2081P	CERTIFIED PROCESSING CORP.	4600094	1	404140	741326	F	6.0	39	07	202	STRB		100
	CERTIFIED PROCESSING CORP.	2600265	2	404150	741326	F	5.9	39	07	630	STRB		250
	CERTIFIED PROCESSING CORP.	2604624	3	404140	741326	F	6.0	39	07	250	STRB		
2106P	JERSEY PLASTIC MOLDERS, INC.	2604728	2	404301	741322	T	5.0	13	09	330	STRB		320
2141P	FFAFF TOOL & MANUFACTURING CO.	2602162	1	404604	740804	F	1.0	17	07	590	STRB		175
	FFAFF TOOL & MANUFACTURING CO.	2602735	2	404604	740805	F	1.0	17	07	740	STRB		140
	FFAFF TOOL & MANUFACTURING CO.	2604269	3	404604	740806	F	1.0	17	07	530	STRB		155
	FFAFF TOOL & MANUFACTURING CO.	2604711	4	404604	740806	F	1.0	17	07	333	STRB		
2167P	SCHERING PLOUGH CORPORATION	2600921	1	404704	741157		3.8	13	02	478	STRB		160
	SCHERING PLOUGH CORPORATION	2604498	2	404703	741157		3.8	13	02	400	STRB		130
2184P	MOUNTAINSIDE HOSPITAL	2602296	1	404845	741219	U	5.3	13	13	400	STRB		350
2247P	SETON COMPANY - LEATHER DIV.	4600160	2	404637	740925	F	1.8	13	14	300	STRB		200
	SETON COMPANY - LEATHER DIV.	4600161	3	404635	740925	F	1.8	13	14	250	STRB		75
	SETON COMPANY - LEATHER DIV.	4600162	4	404633	740926	F	1.8	13	14	200	STRB		200
	SETON COMPANY - LEATHER DIV.	2604969	5	404631	740927	F	1.8	13	14	400	STRB		500
	SETON COMPANY - LEATHER DIV.	2604968	6	404642	740922	F	1.9	13	14	400	STRB		100
2267P	GLEN RIDGE COUNTRY CLUB	2601952	1	404922	741132	S	5.5	13	02	353	STRB		400
	GLEN RIDGE COUNTRY CLUB	2604134	2	404925	741145	S	5.6	13	02	300	STRB		200
	GLEN RIDGE COUNTRY CLUB	4600168	3	404928	741141	F	5.7	13	02	400	STRB		10
2268P	FOREST HILL FIELD CLUB	2604258	1	404749	741041	S	3.6	13	02	238	STRB		60
	FOREST HILL FIELD CLUB	POND		404808	741051	F	4.0	13	02	14	SPLD		1200
2274P	SCHERING PLOUGH LABS	4600145	2	404103	741357	F	6.8	39	19	676	STRB		250
	SCHERING PLOUGH LABS	2600291	3	404103	741357	F	6.8	39	19	635	STRB		500
2313P	PENCO OF LYNCHBURST INC.	4600172	1	404845	740714	F	4.2	03	32	267	STRB		110
	PENCO OF LYNCHBURST INC.	4600173	2	404845	740715	F	4.2	03	32	313	STRB		135
	PENCO OF LYNCHBURST INC.	2601699	4	404845	740715	F	4.2	03	32	410	STRB		150

DESCRIPTION OF NJGS CASE INDEX SITES

The NJGS Case Index Sites listing contains the following fields:

CONTAM: contaminate code
DISTANCE: distance in miles from center of circle
FMCODE1: NJGS primary formation code
FMCODE2: NJGS secondary formation code
LAT: latitude of site
LON: longitude of site
NAME: name and location of site
SITENUM: site identifier
STATUS1: current status of site
STATUS2: further description of site status

The data in this listing is down-loaded on a regular basis from the New Jersey Geological Survey's Case Index File. The actual transfer date is printed on the left side of the enclosed map. This file contains many of the identified potential pollution sites in the State, but does not include all of them. For example the file does not generally include spill sites. Recognizing the fact that this list may contain significant errors and omissions, it is advisable to use this resource as a guide and to verify all information.

If you have any questions, please call or write to us in reference to the "Radius Program" at:

NJDEP
Division of Water Resources
Bureau of Water Allocation
CN-029
Trenton, NJ 08625

(609) 292-2957

Please see the attached sheets for definitions of the codes used in the NJGS Case Index Sites listing.

CODES USED IN THE NJGS CASE INDEX SITES LISTING

This packet contains definitions of the database codes used in the NJGS Case Index Sites listing.

CONTAM

00 = ORGANIC CHEM (VOLATILE)
01 = ORGANIC CHEM (NONVOLATILE)
02 = CHLOROFORM
03 = '1,2 - DICHLOROETHANE'
04 = '1,1,1 - TRICHLOROETHANE'
05 = TETRACHLOROETHYLENE
06 = DICHLOROETHYLENE
07 = TRICHLOROETHYLENE
08 = CARBON TETRACHLORIDE
09 = METHYLENE CHLORIDE
10 = ACETONE
11 = BENZENE
12 = TOLUNE
13 = XYLENE
14 = METHYL ISOBUTYL KETONE
15 = ETHYLENE DICHLORIDE
16 = METHYL ETHYL KETONE
17 = TETRAHYDROFURAN
18 = '1,2 - DICHLOROETHENE'
19 = '1,1 - DICHLOROETHENE'
20 = '1,1 - DICHLOROETHANE'
21 = '1,1,2,2 - TETRACHLOROETHYLENE'
22 = '1,1,2,2 - TETRACHLOROETHANE'
23 = TRICHLOROFLUOROMETHANE
24 = CHLOROBENZENE
25 = ETHYLBENZENE
26 = '1,2 - DICHLOROBENZENE'
27 = DICHLOROFLUOROMETHANE
28 = STYRENE
29 = ISOPROPYL ALCOHOL
30 = VINYL CHLORIDE
31 = HEXANE
32 = HEPTANE
33 = PHENTANE
34 = PHENOLS
35 = METALS
36 = LEAD
37 = IRON
38 = MERCURY
39 = CHROMIUM
41 = ARSENIC
42 = CADMIUM
43 = CHLORIDE
44 = SODIUM
45 = NITRATE

46 = SULFATE
47 = PESTICIDES
48 = HERBICIDES
49 = NATURAL RADIOACTIVITY
50 = 'PCB' 'S'
51 = GASOLINE
52 = DIESEL FUEL
53 = FUEL OIL
54 = INORGANIC CHEMICALS
55 = GREASES AND FATS
56 = SLUDGE
57 = ACID
58 = LEACHATE
59 = METHANE GAS
60 = DYE
61 = IODINE
62 = EXPLOSIVES
63 = PETROLEUM HYDROCARBONS
64 = PHARMACEUTICALS
65 = SURFACTANTS
66 = SEPTIC DISCHARGES
67 = RADIOACTIVE WASTE
68 = UNKNOWN
69 = TRICHLOROETHYLENE
70 = COAL TAR
71 = ASBESTOS
72 = DIOXIN

FMCODE

0000 = 'N/A'
0100 = QUATERNARY
0101 = MEADOW MAT
0102 = ALLUVIUM
0103 = FILL
0104 = BEACH SANDS
0110 = GLACIAL, UNDIFFERENTIATED
0120 = GLACIAL, UNSTRATIFIED TILL
0130 = STRATIFIED DRIFT
0140 = MORaine
0144 = TERMINAL MORaine
0148 = RECESSIOnAL MORaine
0150 = BRIDGETON
0160 = CAPE MAY
0161 = HOLLY BEACH MBR
0170 = PENNSAUKEN
1000 = TERTIARY
1010 = BEACON HILL
1020 = COHANSEY SAND
1025 = COHANSEY KIRKWOOD
1030 = KIRKWOOD SAND
1031 = UPPER MEMBER
1032 = LOWER MEMBER

46 = SULFATE
47 = PESTICIDES
48 = HERBICIDES
49 = NATURAL RADIOACTIVITY
50 = 'PCB''S'
51 = GASOLINE
52 = DIESEL FUEL
53 = FUEL OIL
54 = INORGANIC CHEMICALS
55 = GREASES AND FATS
56 = SLUDGE
57 = ACID
58 = LEACHATE
59 = METHANE GAS
60 = DYE
61 = IODINE
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67 = RADIOACTIVE WASTE
68 = UNKNOWN
69 = TRICHLORETHYLENE
70 = COAL TAR
71 = ASBESTOS
72 = DIOXIN

FMCODE

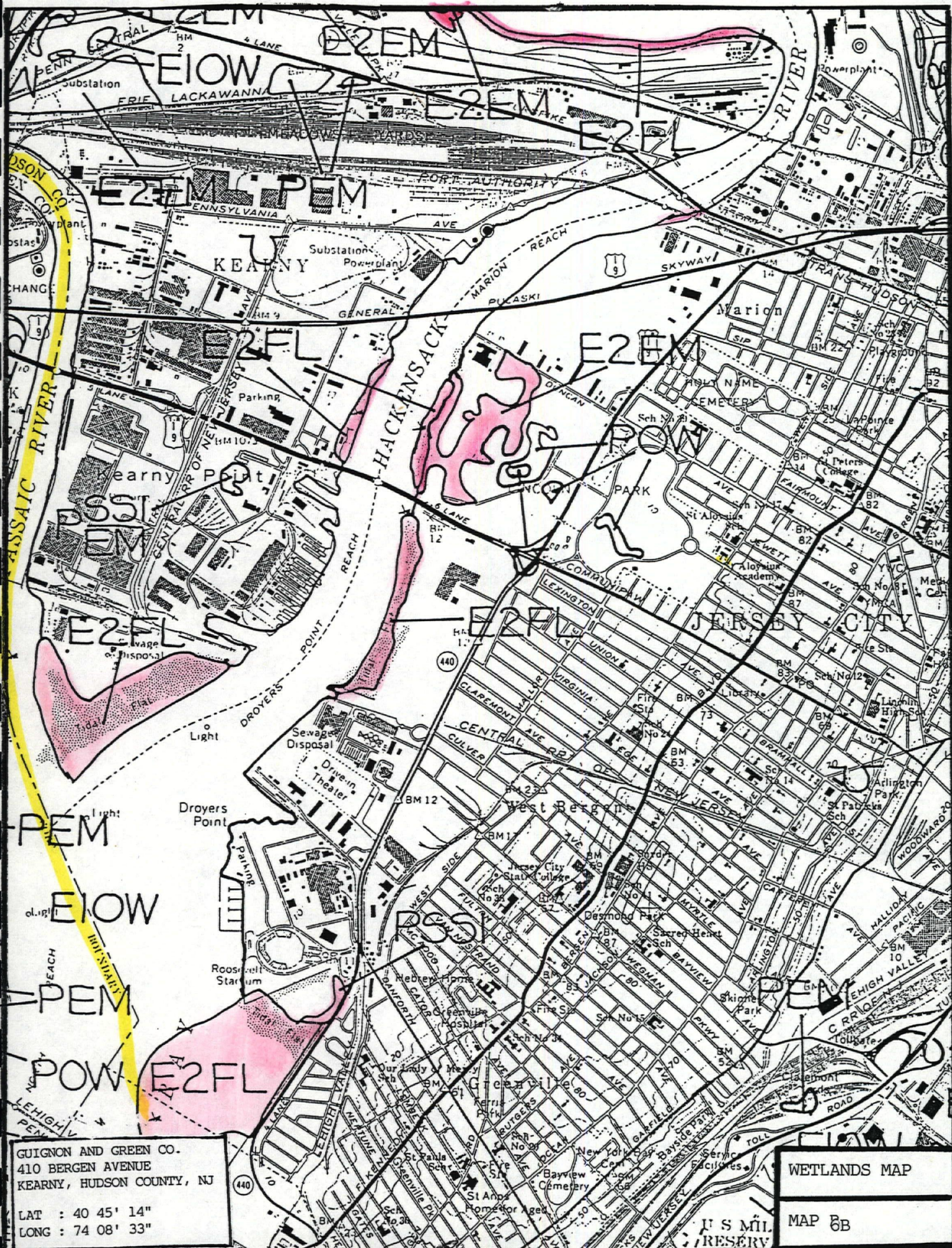
0000 = 'N/A'
0100 = QUATERNARY
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0140 = MORaine
0144 = TERMINAL MORaine
0148 = RECESSIONAL MORaine
0150 = BRIDGETON
0160 = CAPE MAY
0161 = HOLLY BEACH MBR
0170 = PENNSAUKEN
1000 = TERTIARY
1010 = BEACON HILL
1020 = COHANSEY SAND
1025 = COHANSEY KIRKWOOD
1030 = KIRKWOOD SAND
1031 = UPPER MEMBER
1032 = LOWER MEMBER

1033 = PINEY POINT MBR
 1040 = SHARK RIVER MARL
 1050 = MANASQUAN MARL
 1060 = VINCENTOWN SAND
 1070 = HORNERSTOWN MARL
 2000 = CRETACEOUS
 2010 = RED BANK AND TINTON SANDS
 2020 = NAVESANK MARL
 2030 = MOUNT LAUREL WENONAH SANDS
 2034 = MOUNT LAUREL SAND
 2038 = WENONAH SAND
 2040 = MARSHALLTOWN FM
 2050 = ENGLISHTOWN SAND
 2060 = WOODBURY CLAY
 2070 = MERCHANTVILLE CLAY
 2080 = MAGOTHY RARITAN FM
 2081 = MAGOTHY RARITAN UPPER MBR
 2084 = MAGOTHY RARITAN MIDDLE MBR
 2088 = MAGOTHY RARITAN LOWER MBR
 2090 = MAGOTHY FM
 2091 = AMBOY STONEWARE CLAY MBR
 2092 = OLD BRIDGE SAND MBR
 2093 = SOUTH AMBOY FIRE CLAY MBR
 2094 = SAYREVILLE SAND MBR
 2095 = WOODBRIDGE CLAY MBR
 2096 = FARRINGTON SAND MBR
 2097 = RARITAN FIRE CLAY MBR
 3000 = TRIASIC JURASSIC
 3010 = BOONTON FM
 3020 = BASALT UNDIFFERENTIATED
 3021 = HOOK MT BASALT
 3030 = TOWACO FM
 3022 = PREAKNESS BASALT
 3040 = FELTVILLE FM
 3023 = ORANGE MT BASALT
 3050 = DIABASE
 3060 = CONGLOMERATE (HAMMER CREEK)
 3070 = BRUNSWICK FM
 3080 = LOCKATONG FM
 3090 = STOCKTON FM
 4000 = DEVONIAN
 4010 = SKUNNEMUNK CNGLM
 4020 = BELLVALE SS PEQUANAC SH
 4030 = KANOUSE SANDSTONE
 4040 = MARCELLUS SHALE
 4050 = ONONDAGE LS
 4060 = ESOPUS GRIT
 4070 = ORISKANY BECRAFT LS
 4080 = NEW SCOTLAND COEYMANS
 5000 = SILURIAN
 5010 = BOSSARDVILLE LS
 5020 = DECKER FM
 5030 = LONGWOOD SHALE
 5040 = POXONO ISLAND

7 = OTHER
8 = BACKLOGGED
9 = TRANS PERMITS
0 = UNKNOWN
F = FIELD REC PROVIDED

STATUS2

O = INVEST CONT
A = CLEAN UP PLAN
B = SAMPLING PLAN
C = INITIAL INVEST
D = RQST PRPSL (RFP)
E = REMEDIAL INVEST
F = FSBLTY STUDY (FS)
G = PLAN, CONST REMEDIAL
H = FREE PRODUCT RECOVERY
I = DSLVD FRACTION RECOV
J = FREE, DSSLVD RECOV
K = CASE ABSORBED



GUIGNON AND GREEN CO.
410 BERGEN AVENUE
KEARNY, HUDSON COUNTY, NJ

LAT : 40 45' 14"
LONG : 74 08' 33"

WETLANDS MAP

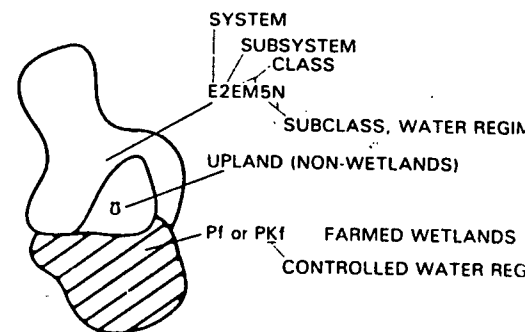
MAP 6B

U S MIL
RESERV

Other information concerning the wetland resources depicted on this document may be available. For information, contact:

identified on the photographs based on vegetation, visible hydrology, and geography in accordance with Classification of Wetlands and Deep-Water Habitats of the United States (An Operational Draft), Cowardin, et al, 1977. The aerial photographs typically reflect conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of the aerial photographs. Thus, a detailed on the ground and historical analysis of a single site may result in a revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this document.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



WETLAND LEGEND

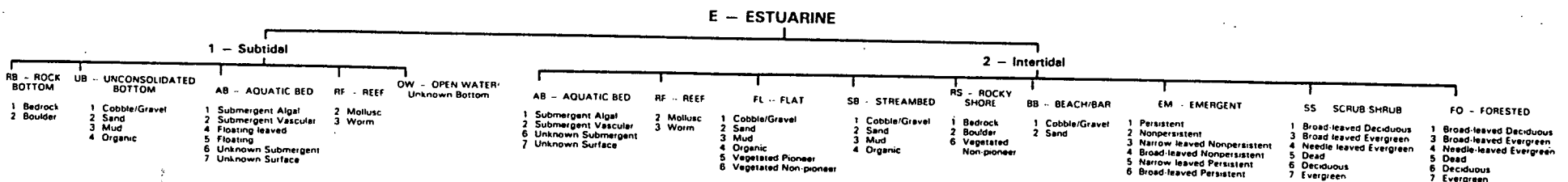
U - Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.

ECOLOGICAL SYSTEM

Ecological Subsystem

CLASS

Subclass

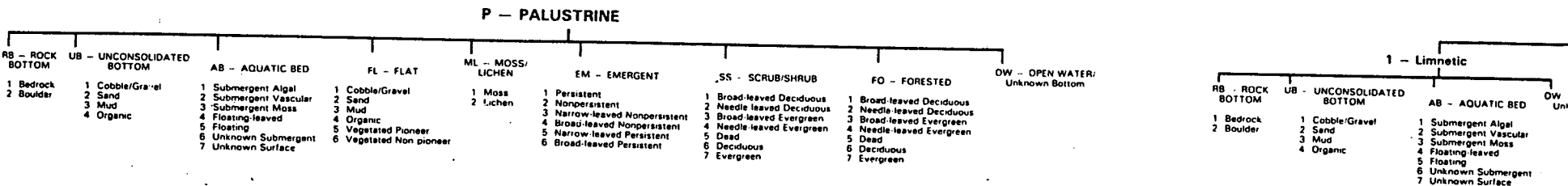


ECOLOGICAL SYSTEM

No Subsystem

CLASS

Subclass

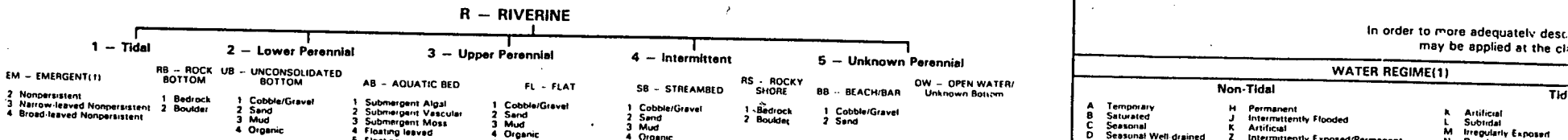


ECOLOGICAL SYSTEM

Ecological Subsystem

CLASS

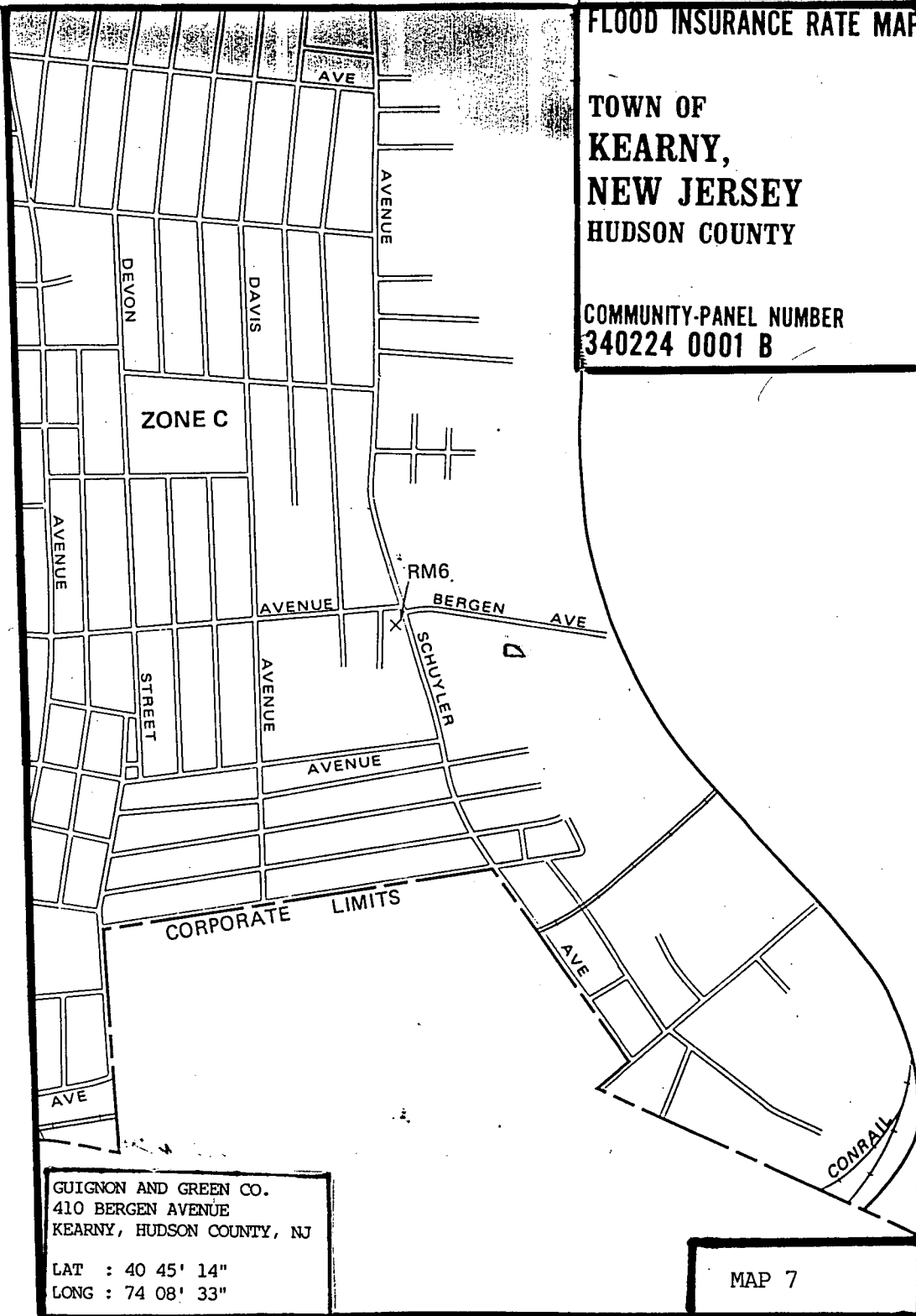
Subclass



FLOOD INSURANCE RATE MAP

TOWN OF
KEARNY,
NEW JERSEY
HUDSON COUNTY

COMMUNITY-PANEL NUMBER
340224 0001 B



GUIGNON AND GREEN CO.
410 BERGEN AVENUE
KEARNY, HUDSON COUNTY, NJ

LAT : 40 45' 14"
LONG : 74 08' 33"

MAP 7

ATTACHMENT A

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

INITIAL NOTICE

GENERAL INFORMATION SUBMISSION (GIS)

This is the first part of a two-part application form. This information must be submitted within 5 days following public release of a decision to close operations or the signing of a sales agreement or option to purchase involving an Industrial Establishment as defined in N.J.S.A. 13:1K-6, the Environmental Cleanup Responsibility Act.

SUBMIT THE ORIGINAL PLUS TWO COPIES OF THIS COMPLETED FORM AND ANY ATTACHMENTS.

Please refer to instructions and N.J.A.C. 7:1-3.7(d) before filling out this form. Answer all questions. Please print or type.

Date: _____

I. A. Industrial Establishment:

Name: Guignon & Green Company Telephone No.: 516/561-2844

Street Address: 99 West Hawthorne Avenue

City or Town: Valley Stream State: New York Zip Code: 11580

Municipality: Kearny County: Hudson

* B. Tax Lot Number: 3.6 Tax Block Number: 252

C. Standard Industrial Classification (SIC) Number: 5161

D. Current Owner (Property):

Name: Clement H. Horst, President Telephone No.: 516/561-2844

Firm: Guignon & Green Company

Street Address: 99 West Hawthorne Avenue

Municipality: Valley Stream State: New York Zip Code: 11580

E. Current Operator of Industrial Establishment:

Name: Same as above Telephone No.: _____

Firm: _____

Street Address: _____

Municipality: _____ State: _____ Zip Code: _____

F. Current Owner (Business, if different from operator):

Name: Same as above Telephone No.: _____

Firm: _____

Street Address: _____

Municipality: _____ State: _____ Zip Code: _____

FOR DEP USE ONLY

Date Rec'd. _____ Notice No. _____

ATTACHMENT A1

- G. If the Industrial Establishment discharges sanitary and/or industrial wastes to a publicly-owned treatment plant, provide the name and address of that facility.

Name: Town of Kearny Telephone No.: _____

Street Address: _____

Municipality: Kearney State: New Jersey Zip Code: _____

Is a septic system used (or used previously) at the site? ☐ Yes ☐ No

- H. Has an ECRA application been filed for this Industrial Establishment or location subsequent to January 1, 1984? ☐ Yes ☒ No If so, when? _____

For what reason _____

Final disposition _____

- I. How is this Industrial Establishment heated? (gas, oil, electricity) Electricity

- J. List previous activities at the location(s) involved (attach additional sheets if necessary). In addition to describing the activities, list the business name(s), current address(es) and dates of ownership operation of the previous activity(ies), if known.

This was a vacant site until Guignon & Green built the facility in 1966

No record exists of any previous activity at this site.

3. If the transaction initiating an ECRA review is the cessation of operations at this location, fill in the date of public release of the decision to close the facility and enclose a copy of the public announcement. Is a cessation of operations involved? ☐ Yes ☒ No

Date of the public release of the decision _____

Is the public release enclosed? ☐ Yes ☒ No

If you checked "no", state the reason(s) No public announcement has been made. The Owners are planning to sell the property as soon as a buyer is located and the current inventory is sold. Negotiations are currently underway with an interested party.

4. If the transaction initiating an ECRA review is an agreement of sale or option to purchase, fill in the date of the execution of that instrument plus provide a copy of the document _____

A. Is a sale involved? ☒ Yes ☐ No

B. Date of Agreement None available

C. Is a copy of the agreement of sale or option to purchase attached? ☐ Yes ☒ No

If you checked "no", state the reason(s) No agreement has been executed to date.

Negotiations are underway with a prospective buyer.

- D. Clearly describe the transaction in terms of the action which initiates the ECRA review (e.g., sale of real estate only, sale of real estate and business, cessation of operations only, etc.):

Cessation of operation and sale of real estate property.

- E. List other parties (purchasers) to the transaction:

NAME	STREET ADDRESS AND MUNICIPALITY	PHONE NO.
John H. Calo Company	99 West Hawthorne Avenue Valley Stream, NY 11580	(516) 561-0711

5. Actual date proposed for closure of operations or transfer of title: _____
6. Authorized agent designated to work with the Department:
- Name: Frank A. Darabi, P.E. Telephone No.: 904/376-6533
- Firm: Darabi and Associates, Inc.
- Street Address: 730 North Waldo Road
- Municipality: Gainesville State: Florida Zip Code: 32601
7. List all federal and state environmental permits applied for and received at this facility (attach additional sheets if necessary).

Check here if no permits are involved: _____

A. New Jersey Bureau of Air Pollution Control

PERMIT NO.	CERTIFICATE NO.	DATE OF APPROVAL OR DENIAL	REASON FOR DENIAL (if applicable)	EXPIRATION DATE
<u>035071</u>	<u>035071</u>	<u>9/19/77</u>	<u>N/A</u>	<u>9/21/87</u>
<u>035072</u>	<u>035072</u>	<u>9/21/77</u>	<u>N/A</u>	<u>9/21/87</u>

B. New Jersey Pollutant Discharge Elimination System

NUMBER	DISCHARGE ACTIVITY	DATE ISSUED OR DENIED	EXPIRATION DATE	BODY OF WATER DISCHARGED INTO
<u>None</u>				

C. United States Environmental Protection Agency (EPA) Identification Number and copy of the most recent generator Annual Report prepared pursuant to the New Jersey Hazardous Waste Regulations.

ID # NoneIs a copy of the Annual Report attached? ☐ Yes ☐ No

D. All other federal, state, local governmental permits.

AGENCY ISSUING PERMIT	PERMIT NUMBER	DATE OF APPROVAL OR DENIAL	EXPIRATION DATE
<u>Hudson Regional Health Commission</u>	<u>0700916</u>	<u>2/19/85</u>	<u>1985 - 1988</u>

8. If applicable, identify all administrative orders, temporary or permanent injunctions, civil administrative penalties, or criminal actions concerning the environment issued against the facility, its owners, or managers during the last ten years.

Check here if no enforcement actions are involved X

A. Date of Action _____

Section of Law or Statute violated _____

Type of Enforcement Action _____

Description of the Violation _____

How was the violation resolved? _____

B. Date of Action _____

Section of Law or Statute violated _____

Type of Enforcement Action _____

Description of the Violation _____

How was the violation resolved? _____

(Add additional pages, if necessary)

I hereby certify that the information furnished on this application and any attachments is true. I am aware that false swearing is a crime in this State. I am cognizant that providing false information is a violation under ECRA and that I may be personally liable for penalties up to \$25,000 per day.

SignatureClement Horst_____
Name (Print or Type)President_____
Title_____
DateATTACHMENT A5

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
HAZARDOUS SITE MITIGATION ADMINISTRATION
BUREAU OF INDUSTRIAL SITE EVALUATION

Page 1 of 4

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

APPLICATION FOR ECRA REVIEW
INITIAL NOTICE

SITE EVALUATION SUBMISSION (SES)

This is the second part of a two-part application submittal and must be submitted within 30 days following public release of the decision to close operations or execution of an agreement of sale or option to purchase.

DATE _____

NAME OF INDUSTRIAL ESTABLISHMENT Guignon & Green Company

ADDRESS 99 West Hawthorne Avenue

CITY OR TOWN Valley Stream, New York ZIP CODE 11580

MUNICIPALITY Kearny COUNTY Hudson

NAME OF PROPERTY OWNER _____

FIRM: Guignon & Green Company

ADDRESS: 99 West Hawthorne Avenue

CITY OR TOWN: Valley Stream, New York ZIP CODE: 11580

MUNICIPALITY Kearny COUNTY Hudson

SUBMIT THE ORIGINAL PLUS TWO COPIES OF THE FOLLOWING.
(NOTE: ITEM FOURTEEN (14) REQUIRES THREE COPIES)

9. A scaled site map identifying all areas where hazardous substances or wastes have been or currently are generated, manufactured, refined, transported, treated, stored, handled or disposed, above or below ground.
IS THIS MAP ENCLOSED? ☒ YES (See Appendix # _____) ☐ NO
10. A detailed description of the most recent operations and processes at the industrial establishment organized in the form of a narrative report designed to guide the Department step-by-step through a plant evaluation, with particular emphasis on areas of the process stream where hazardous substances and wastes are generated, manufactured, refined, transported, treated, stored, handled or disposed on site, above or below ground. Also identify any floor drains with their points of discharge, septic systems if applicable, seepage pits and dry wells. Please note that establishments which ceased production prior to December 31, 1980 but are subject to ECRA because of on-going storage beyond that date, must provide details on past operations.
IS THIS REPORT ENCLOSED? ☒ YES (See Appendix # _____) ☐ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

FOR DEP USE ONLY

Notice No. _____

11. A. A description of the types, age (installation date), construction material, capacity, contents, and locations of storage vessels, surface impoundments, landfills, or other types of storage facilities, including drum storage, containing hazardous substances or wastes.

ARE THESE FACILITIES IDENTIFIED ON YOUR SITE MAP OR DESCRIBED IN A NARRATIVE REPORT?
☐ YES (See Appendix #) ☒ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): There are currently no hazardous waste stored at the site.

3. The integrity of all underground tanks which contain hazardous wastes or substances must be verified. This may be accomplished in one of several ways: a) Performance of a satisfactory leak test in accordance with Criterion 319 of the National Fire Protection Association, or; b) Performance of a subsurface soil investigation (soil borings and analysis), or; c) Excavate and remove the tank and establish the absence of contamination, or; d) other methods approved by the NDEP.

ARE THE RESULTS OF THE LEAK DETECTION TEST OR THE SUBSURFACE INVESTIGATION ENCLOSED?
☐ YES (See Appendix # _____) ☒ NO

IF YOU HAVE CHECK "NO", STATE THE REASON(S): There are no underground tanks at the site.

12. A complete inventory of hazardous substances and wastes, including description and locations of all hazardous substances or wastes generated, manufactured, refined, transported, treated, stored, handled or disposed of on site, above and below ground, and a description of the location, types and quantities of hazardous substances and wastes that will remain on site. (Attach additional sheets if necessary.) Review N.J.A.C. 17:27, Appendix A and N.J.A.C. 17:26-3 prior to completing to ensure that all defined hazardous materials are included.

[illegible]

13. A. A detailed description, date and location on a scaled map of any known spill or discharge of hazardous substances or wastes that occurred during the historical operation of the site and a detailed description of any remedial actions undertaken to handle any spill or discharge of hazardous substances or wastes. (Attach additional sheets if necessary.)

IS THIS INFORMATION ENCLOSED? ☐ YES (See Appendix # _____) ☒ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S):

No spill of hazardous substances or wastes has occurred at this site.

ARE THE SPILLS IDENTIFIED ABOVE INDICATED ON THE SCALED SITE MAP? ☐ YES ☒ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): Not Applicable

13. B. If this facility has an approved Spill Prevention Control and Countermeasure Plan (SPCC), enclose a copy with this submittal.

IS YOUR SPCC PLAN ENCLOSED? ☐ YES (See Appendix # _____) ☒ NO, this facility is not required to have an SPCC plan

14. A. A detailed sampling or other environmental evaluation measurement plan which includes proposed soil, groundwater, surface water, surface water sediment, and air sampling (determined appropriate for the site). (This sampling plan must be developed in conformance with EPCRA Regulations 40 CFR 300.41-43, 45, and Quality Assurance Guidelines as developed by DEP.)

ARE THREE COPIES OF THE SAMPLING PLAN ENCLOSED? ☐ YES (See Appendix # _____) ☒ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): We are of the opinion that due to nature of operation and extent of inventory kept, no sampling plan should be required.

14. B. If the sampling plan includes groundwater sampling and/or the installation of monitoring wells, the applicant must complete a "Request for Hydrogeologic Assessment" form (blank form attached).

IS GROUNDWATER SAMPLING PROPOSED? ☐ YES ☒ NO

IS THE "REQUEST FOR HYDROGEOLOGIC ASSESSMENT" FORM ATTACHED? ☐ YES (See Appendix # _____) ☒ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

15. A detailed description of the procedures to be used to decontaminate and/or decommission equipment and buildings involved with the generation, manufacture, refining, transportation, treatment, storage, handling, or disposal of hazardous wastes or substances including the name and location of the transporter, the ultimate disposal facility, and any other organizations involved.

IS THE DETAILED DESCRIPTION ENCLOSED? ☐ YES (See Appendix # _____) ☒ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): No decontamination is planned as none is deemed necessary. No hazardous waste or substances are on site.

16. Copies of all previous soil, groundwater and surface water sampling results, including effluent quality monitoring, conducted at the site of the industrial establishment during the history of ownership operation by the owner or operator. Also include a detailed description of the location, collection, chain of custody, methodology, analyses, laboratory, quality assurance/quality control procedures, and other factors involved in preparation of the sampling results.

ARE HISTORICAL RESULTS ENCLOSED? ☐ YES (See Appendix # _____) ☒ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): None have been conducted and none is available.

17. List any other information you are submitting or which has been formally requested by this agency:
- None
- _____
- _____

I hereby certify that the information furnished on this application and any attachments is true. I am aware that false swearing is a crime in this State. I am cognizant that providing false information is a violation under ECPA and that I may be personally liable for penalties up to \$25,000 per day.

Date

Signature

Clement Horst

Name (Print or Type)

President

Title

ATTACHMENT A9

A REPORT OF PAST AND PRESENT
OPERATIONS AND ACTIVITIES AT
GUIGNON AND GREEN FACILITY IN
KEARNY, NEW JERSEY

Data Compiled by Frank A. Darabi

January 1986

ATTACHMENT A10

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	<u>ACKNOWLEDGEMENT</u>	1
2.0	<u>INTRODUCTION</u>	1
3.0	<u>PERSONNEL</u>	1
4.0	<u>PHYSICAL FACILITY</u>	1
5.0	<u>CHEMICALS AND MATERIALS HANDLED</u>	2

LIST OF TABLES

<u>Table</u>	<u>Title</u>	<u>Page</u>
1	Chemical Products Stored for SCM	5
2	Creosote Inventory	6

Darabi 1:Past/Present.0
1.13.86

ATTACHMENT All

was never involved in the manufacturing process. The majority of chemicals that were stored at this site were on a limited basis. The following is a list of chemicals and handling procedures for each.

<u>Pine oil</u>	Brought in by either rail in tank cars or by transport tank trucks. Material was either shipped out directly from the tank cars or pumped into the storage tanks. From the storage tanks they were shipped either in bulk or drummed for stock and later sale.
<u>Dipentene</u>	Brought in by either rail in tank cars or by transport tank trucks. Material was either shipped out directly from the tank cars or pumped into the storage tanks. From the storage tanks they were shipped either in bulk or drummed for stock and later sale.
<u>Tall Oil</u> <u>and</u> <u>Distilled</u> <u>Tall Oil</u>	Brought in by either rail in tank cars or by transport tank trucks. Material was either shipped out directly from the tank cars or pumped into the storage tanks. From the storage tanks they were shipped either in bulk or drummed for stock and later sale.
<u>Rosin</u>	Brought in by truck in bags or drums. Stored in the yard and shipped out intact in the original package.
<u>Rosin oil</u>	Brought in by truck or drums. Stored in the yard and shipped out intact in the original package.
<u>Fine</u> <u>Chemicals</u>	A number of chemical products (see Table 1) were stored in the warehouse for SCM organic chemicals. These chemicals were brought in by truck in sealed drums and were shipped out in the original package.

house, and 10,000 square feet of asphalt paving. In addition, the following aboveground tank trucks are located at the facility:

1. A 3-compartment aboveground stainless steel tank with heating coils for storage of pine oil and fatty acids (total storage 11,100 gallons).
2. A 2-compartment aboveground stainless steel tank with heating coils for storage of pine oil and fatty acids (11,100 gallons).
3. A 7,000-gallon aboveground black iron tank car which is empty and has not been used for a long time.
4. A 3-compartment aboveground black iron tank car with heating coils and 6,300-gallon capacity for storage of turpentine and dipentene.
5. A 1-compartment aboveground black iron tank car with heating coils and 10,000-gallon capacity for storage of turpentine and dipentene.
6. A 1-compartment aboveground black iron tank car with heating coils and 3,000-gallon capacity for storage of turpentine and dipentene.
7. A 4,000-gallon tanker for storage of kerosene and mineral spirits.
8. A 500-gallon aboveground fuel oil storage tank.

In addition, 55-gallon steel drums containing non-hazardous solvents, identified in the attached list of chemicals, is stored in the yard and within the warehouse.

5.0 CHEMICALS AND MATERIALS HANDLED

As previously mentioned, Guignon and Green was primarily a manufacturer's representative for a specific number of chemicals and

Darabi 1.1(Past/Present).3
1/10/00

1.0 ACKNOWLEDGEMENT

The data and information presented in this report have been gathered from the following individuals:

Mr. Clement Horst, President	1962 - retired July 1977
Mr Robert Miller, President	1977 - retired December 1985
Mr. Clement Horst, President	1985
Mr. Bob Bing	at Plant since 1967

2.0 INTRODUCTION

Guignon and Green is a wholly-owned subsidiary of Continental Turpentine and Rosin Corporation. Guignon and Green was acquired by Continental Turpentine for the sole purpose of wholesale marketing of naval store, pine oil, turpentine, tall oil rosin, and related products. Guignon and Green built the warehouse and related facilities on this site in 1966 on a lease basis, and purchased the property in March 1982.

3.0 PERSONNEL

Three corporate staff members of Guignon and Green have been stationed at the corporate office located in Valley Stream, New York, and three employees have been stationed at the warehouse in Kearny, New Jersey.

4.0 PHYSICAL FACILITY

The facility consists of 0.877 acre (38,202 square feet). This parcel of land is located on the southside of Bergen Avenue and East of Schuyler Avenue in Kearny, New Jersey. The site improvements include a 1,449-square-foot, 1-story unheated warehouse with reinforced concrete footings and concrete floor structure, and an office containing 240 square feet, 100 lineal feet of railsiding, a pump house, a boiler

Creosote

Guignon and Green in the past has purchased Coopersote (100 percent creosote) from Coopers Creek Chemical Corporation in sealed 55-gallon drums. These drums were stored in the reinforced concrete floor warehouse and sold to buyers, primarily Nationwide Chemical Company in the original drum. A complete inventory of creosote purchased and sold for the time period that data were available is included in Table 2. Guignon and Green handled creosote in primarily the same way prior to 1993; however, no record is available of purchase and sales transactions. Mr. Bob Bing, a company employee since 1967, states that the creosote drums have always been stored in the warehouse and none have ever been stored in the yard. Shipment of the material has been in full drums; however, some 5-gallon containers have been sold previously. Mr. Bing states that there has never been any creosote release or spill on the warehouse floor.

Table 1. Chemical Products Stored for SCM

Chemical	Characteristics	EPA No.
Alpha Pinene P&F-85°	Pinene, Flammable Liquid	UN-2368
Alpha Terpineol P&F-153°	Chem NOS, Combustible Liquid	NA-1993
Beta Pinene P&F-95°	Pinene Flammable Liquid	UN-2368
Camphene 46-105°	Pinene, Combustible Liquid	NA-1993
Citral 70-180°	Chem NOS, Combustible Liquid	NA-1993
Citronellal 80-174°	Chem NOS, Combustible Liquid	NA-1993
Citronellol 80-193°	Chem NOS, Combustible Liquid	NA-1993
Dipentene Perfume Grade-115°	Turpentine, Combustible Liquid	UN-1272
Gamma Terpinene P&F-134°	Chem NOS, Combustible Liquid	NA-1993
Isobornyl Acetate-193°	Chem NOS, Combustible Liquid	NA-1993
Lemon 300 (Base)-121°	Extract Flavoring, Combustible Liquid	UN-1197
Lemon 337-116°	Extract Flavoring, Combustible Liquid	UN-1197
Lemon 360-122°	Extract Flavoring, Combustible Liquid	UN-1197
Lime 400 (Base)-120°	Extract Flavoring, Combustible Liquid	UN-1197
Lime 410-123°	Extract Flavoring, Combustible Liquid	UN-1197
d-Limonene Redistilled-122°	Chem NOS, Combustible Liquid-Citrus	NA-1993
Linalool Pure-174°	Chem NOS, Combustible Liquid	NA-1993
Linalool 925-174°	Chem NOS, Combustible Liquid	NA-1993
Linalyl Acetate-192°	Chem NOS, Combustible Liquid	NA-1993
dl-Menthol USP-195°	Chem NOS, Combustible Liquid	NA-1993
Myrcene P&F-111°	Chem NOS, Combustible Liquid	NA-1993
Peppermint 540-175°	Extract Flavoring, Combustible Liquid	UN-1197
Terpineol 350-197°	Pine Oil, Combustible Liquid	UN-1272
Terpinolene-153°	Pine Oil, Combustible Liquid	UN-1272
Tetrahydrofarnesol-171°	Chem NOS, Combustible Liquid	NA-1993

Source: Guignon & Green Company, 1985

Date: 1. Past/Present. 5
1/10/85ATTACHMENT A16

Table 2. Creosote Inventory

Number of Drums Purchased*	Date	Invoice Number	Number of Drums Sold	Drums Sold To	Date	Invoice Number	Gallons
10	11/83	#37935	4	Nationwide Chemical Company	11/18/83	#27907	220
			1	Seidler Chemical Company	11/18/83	#27908	55
			5	Nationwide Chemical Company	04/18/84	#28302	275
20	05/84	#40646	15	Nationwide Chemical Company	06/13/84	#28419	825
			5	Nationwide Chemical Company	07/11/84	#28518	275
10	07/84	#40492	10	Nationwide Chemical Company	07/25/84	#28550	550
25	08/84	#41243	25	Nationwide Chemical Company	08/13/84	#28588	1,375
15	10/84	#42585	15	Nationwide Chemical Company	10/30/84	#28804	825
05	05/85	#45124	3	S.I. Hdwe. Company	05/24/85	#29298	165
			2	Nationwide Chemical Company	08/29/85	#29534	110

* Drums purchased from Cooper Creek Chemical Corp.

Source: Gillingham & Green Company, 1985.

**DARABI
AND
ASSOCIATES, INC.**

Environmental Consultants

Suite A, 730 North Waldo Road, Gainesville, Florida 32601

Phone: 904 376-6533

February 14, 1986

Mr. Leonid Carnett
New Jersey Department of Environmental Protection
Bureau of Industrial Site Evaluation CN 028
Trenton, New Jersey 08625

RE: Guignon & Green Company
ECRA Case No.: 86034


Dear Mr. Carnett:

In response to the February 11, 1986 request for additional information please be advised of the following:

- Item No. 3: The decision to close the facility has never been made public. The company entered into negotiations with John H. Calo Company for the sale of the property during the first week of December 1985. The plant is no longer receiving any shipments, the sale of material on hand is however continuing.
- Item No. 4: Copy of agreement will be provided as soon as it is executed by both parties.
- Item No. 5: No date has been established, this information will be on the final agreement.
- Item No. 9: A new site map showing the requested information is attached.

Sincerely,

DARABI AND ASSOCIATES, INC.


Frank A. Darabi, P. E.
President

FAD:db

enclosure:

**DARABI
AND
ASSOCIATES, INC.**

Environmental Consultants

Suite A, 730 North Waldo Road, Gainesville, Florida 32601

Phone: 904/376-6533

January 30, 1986

Mr. Richard J. Katz, Assistant Chief
Bureau of Industrial Site Evaluation
New Jersey Department of Environmental Protection
428 East State Street
CN028
Trenton, New Jersey 08625

RE: Guignon & Green Company
ERCA Case No.: 86034

Dear Mr. Katz:

We trust the following response to the completeness review dated January 23, 1986 is adequate to resume processing of the file.

A. Small Business Affidavit

Guignon & Green has never had more than four employees (at the plant site) for the entire period of time they have been in business. A new affidavit will be sent to you directly by Mr. Horst.

1. The industrial establishment address is as follows:

a. The Kearney Plant Site (no mail)
410 Bergen Avenue
Kearney, New Jersey 07032
201/998-4042

b. The New York Business Office
99 West Hawthorne Avenue
Valley Stream, New York 11580
516/561-2844

f. The business owner for the facility is:

Continental Turpentine & Rosin Corporation
P.O. Box QQ
Cross City, Florida 32628

g. The facility is serviced by the City of Kearney sewage treatment plant located at Central Avenue in South Kearney. City of Kearney also provides water to the site.

2. No response needed.

ATTACHMENT A19

Mr. Richard J. Katz
January 30, 1986
Page 2

3. The facility no longer receives shipment of any materials and is in the process of selling the inventory on hand. The prospective buyer, John H. Calo Company, is engaged in the same business as Guignon & Green and is expected to purchase all inventory on hand at the time of closing.
4. An agreement in principal has been worked out between Guignon & Green and John H. Calo Company for the sale of the facility. A copy of the signed agreement, once executed, will be supplied to DEP.
5. A tentative sales date has not been established.
- 6., 7., & 8. No response needed.
9. The map attached in the report was based on a boundary survey and represents the entire site. The paved parking identified in the map does not belong to Guignon & Green and has never been used by Guignon & Green, it was identified to show the surrounding business.
10. We have been advised by the Company officials that the referenced 7,000 gallon black iron tank car when in service several years ago was used for storage of turpentine.

We trust that we have adequately addressed your questions. Please feel free to call us should you require further clarification.

Sincerely,

DARABI AND ASSOCIATES, INC.

Frank A. Darabi
Frank A. Darabi, P.E.
President

FAD:db

xc: Mr. Horst

ATTACHMENT A20

ATTACHMENT B

Bureau of Industrial Site Evaluation
Environmental Cleanup Responsibility Act

Report of Inspection

ECRA Case #86034

Date of Inspection 4/22/86

Inspection Category: Preliminary

Inspector: Michael Metlitz

Industrial Establishment: Guignon & Green Company

Location: 410 Bergen Ave.
Kearny Town, Hudson County

Individuals Involved: Frank Darabi, Consultant
C.H. Horst, President, Guignon & Green Co.
Bob Bing, Supervisor Warehouse, Guignon & Green Co.
Ravi Gupta, NJDEP, BISE

NARRATIVE DESCRIPTION

Arrived at industrial establishment at 10:20 am. Weather was overcast with occasional drizzle. I met the above mentioned individuals at the entrance to facility. I inspected the entire facility and discussed the deficiencies and requirements with Mr. Darabi.

DEFICIENCIES NOTED

1. Drum storage still exists at site.
2. Next to tank #7 which previously stored mineral spirits, lube oil, and kerosene there is a large stain in the soil that goes to creek. Drums were filled directly from this tank.
3. There was a pallet fire in the drum storage area about 6 years ago between tank #7 and #6.
4. There is a spill of tall oil and fatty acid S96 between tank #2 and #5.
5. Buckets are drained on a rack in front of tank #4 to the ground.
6. Tanks were cleaned by buyer and the waste from cleaning is presently stored in several 55 gallon drums.
7. The floor inside the pump house has been cleaned but around the outside edge of the building there is a buildup of a thick material.
8. Empty used drums are stored upside down with bung holes open.

ACTIONS REQUIRED ON THE PART OF THE APPLICANT

1. Submit current inventory at site. Proof of final disposition of all stored materials must be submitted when available. Those materials that belong to the buyer and those that the buyer wants should be inventoried on an affidavit from the buyer stating his acceptance of those materials.
2. A Sampling Plan (in triplicate) must be submitted for this site. The Sampling Plan must include but not be limited to the information required under N.J.A.C. 7:1-3.7(d)14. Since drums were stored on the ground, these areas should be included in Sampling Plan. The Sampling Plan must delineate the extent of contamination of the spill at tank #7 and also include but not limited to the areas noted under deficiencies #3, 4, 5, and 8.
3. Solid waste spills noted under deficiencies #4, and 7 must be cleaned up.

ATTACHMENT B1

4. What is fatty acid S96? Submit a material safety data sheet for this substance if it does not have a common generic name.
5. Samples to be taken at tank #7 spill must be for petroleum hydrocarbons, (EPA method 418.1 modified for soil) BTX (Benzene, Toluene, and xylenes) and Naphthalene using methods outlined in USEPA SW846. The current cleanup level for petroleum hydrocarbons in soil is 100 ppm and that for total volatile organics in soil is 1 ppm. These values are subject to change on a case by case basis.

ACTIONS REQUIRED ON THE PART OF BISE

1. Review Sampling Plan when submitted.
2. Mr. Darabi requested the phone numbers for the New Jersey Geologic Survey and Waste Classification. These numbers are:
New Jersey Geological Survey - 609-292-0668
Bureau of Hazardous Waste Classification and Manifest - 609-292-8341

Inspector/Case Manager Signature _____

Approved: [Signature], Supervisor
Bureau of Industrial Site Evaluation

ATTACHMENT C

GERAGHTY & MILLER, INC.

SOIL SAMPLING AND SPILL DELINEATION

GUIGNON & GREEN

KEARNY, NEW JERSEY

INTRODUCTION

In May 1986, Guignon & Green retained Geraghty & Miller, Inc. to provide hydrogeological consulting services with respect to conducting an investigation of soil quality at the Guignon & Green facility in Kearny, New Jersey. The objective of the study was to evaluate the impact of facility operations on surficial soil quality, and to satisfy investigative requirements of the Environmental Cleanup Responsibility Act (ECRA) of the State of New Jersey.

The investigation was carried out in accordance with a formal ECRA Sampling Plan submitted to the Bureau of Industrial Site Evaluation (BISE) of the New Jersey Department of Environmental Protection (NJDEP) on June 9, 1986, and modifications required by BISE, as delineated in a letter from BISE to Darabi Associates, Inc. (consultants to Guignon & Green), dated July 24, 1986. The sampling plan and modification letter are presented in Appendix A. BISE has designated this study as ECRA Case #86034.

FIELD PROGRAMDrilling Technique

On August 5, 1986, seventeen (17) soil borings were drilled at the Guignon & Green facility at locations shown on Figure 1. The borings were hand augered with a bucket-type auger to a maximum depth of two (2) feet below ground surface. Samples were collected every 0.5 feet, described and logged. The geologic logs of the borings are presented in Appendix B.

Sampling

The selection of samples for chemical analysis was made according to guidelines established in the NJDEP modification letter, as follows:

<u>Analysis</u>	<u>Soil Types</u>	<u>Depth of Sample (in.)</u>		
TPHC ¹	All	0	-	6
Base/Neutral Extractable Organic Compounds	All	0	-	6
Volatile Organic Compounds	Sand	18	-	24
	Silt	12	-	18
	Clay	6	-	12

1 Total Petroleum Hydrocarbons.

The soils encountered were consistently sandy in nature. As such, the samples submitted for volatile organic (or BTX) analysis were collected from the interval from 18 to 24 inches below land

GERAGHTY & MILLER, INC.

surface or just above the water table, if the water table occurred at a depth of less than two feet. For the purpose of quality control, replicate samples were collected at two locations. The sampling sites, and the parameters for which samples were analyzed, are listed below:

<u>Sampling Site</u>	<u>TPHC</u>	<u>VOCs</u>	<u>Base/Neutral</u>	<u>B,T,X</u>	<u>Napthalene</u>
1 (Background)	X				
2	X				
3	X				
4	X				
19 (Replicate 4)	X				
5	X				
6	X	X	X		
7	X				
18 (Replicate 7)	X				
8	X				
9	X				
10	X				
11	X				
12	X				
13	X				
14	X			X	X
15	X			X	X
16	X			X	X
17	X				

The samples were analyzed by General Testing Corporation of Hackensack, New Jersey. The analytical results are summarized in Table 1, and the complete laboratory reports are presented in Appendix C.

Decontamination

To prevent potential cross-contamination of samples within the bore hole, the sampling equipment was decontaminated after every 0.5

GERAGHTY & MILLER, INC.

foot interval, in accordance with the following guidelines established for ECRA sites by the NJDEP:

Decontamination protocol consisted of:

1. Mechanical removal of soil particles
2. Potable water rinse
3. Scrub with laboratory detergent
4. Distilled water rinse
5. Acetone rinse
6. Air-drying
7. Distilled water rinse

Spill Delineation

On August 6, 1986, an investigation was undertaken to determine the extent of spills due to the transfer of kerosene and mineral spirits in the area surrounding Tank #7. Soil samples were taken using a bucket-type auger at five foot horizontal intervals around the tank from a depth of 0.5-1.0 foot below ground surface; the sampling points are identified on Figure 2. The samples collected were monitored for volatile organic compounds using an organic vapor analyzer; the readings are shown on Figure 2. Augering and monitoring were continued until a background reading at or below 40 ppm was obtained, or obstacles encountered (i.e., other tank cars, standing water).

Discussion

The BTX analysis around Tank #7 indicates that, with the exception of sampling point No. 17, there has not been appreciable

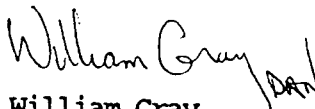
GERAGHTY & MILLER, INC.


impact due to fuel spillage. The high TPHC results in the vicinity of Tank #7, and at other locations on the facility, are possibly due to the presence of other, non-hazardous, hydrocarbons, such as turpentine, fatty acids, and other related compounds. In the drum storage areas, petroleum hydrocarbons were never stored, so the relatively high TPHC readings at sampling points Nos. 10, 12, and 13 may be due to the presence of other non-hazardous hydrocarbons. The infra-red method utilized to analyze for TPHC is a broad scan, and will detect a variety of different hydrocarbons.


The presence of ethylbenzene, toluene, and a few base/neutral extractable compounds at sampling point No. 6 may be due to the past occurrence of a small leak or spill associated with the fuel oil storage area. These chemicals were never used or stored at the site.

Respectfully Submitted,

GERAGHTY & MILLER, INC.


William Gray
Scientist


Daniel A. Nachman
Senior Scientist


Vincent W. Uhl, Jr.
Associate

ATTACHMENT C5

Table 1: Analytical Results of Soil Samples Collected at Guignon & Green Facility, Kearny, New Jersey

[---Volatile Organic Compounds---] [-----Base/Neutral Extractable Organic Compounds-----]										
Soil Borings	Total Petroleum									
/Parameters	Hydro-	Benzene	Xylene	Toluene	Ethyl-	Anthracene	Fluoro-	Benzo (a)	Bis (2) ethyl-	Chrysene
	carbons				benzene		anthene	anthracene	hexyl phthalate	
1	98									
2	303									
3	383									
4	14,800									
19 (Rep. 4)	36,800									
5*	16,800									
6*	18,200	<100	<1000	460	15,000	12,000	720	220	1,200	370
7	720									
18 (Rep. 7)	262									
8	186									
9	<30									
10	9,290									
11	440									
12	4,010									
13	7,660									
14	869	<5	<5	<5	<5					
15	1,190	<5	<5	13	<5					
16	3,200	<5	<5	<5	<5					
17	748	<100	<100	1,400	<100					

Notes:

* Sample 6 was analyzed for all priority pollutant volatile organic compounds; toluene and ethylbenzene were the only compounds detected.

Blank = not analyzed.

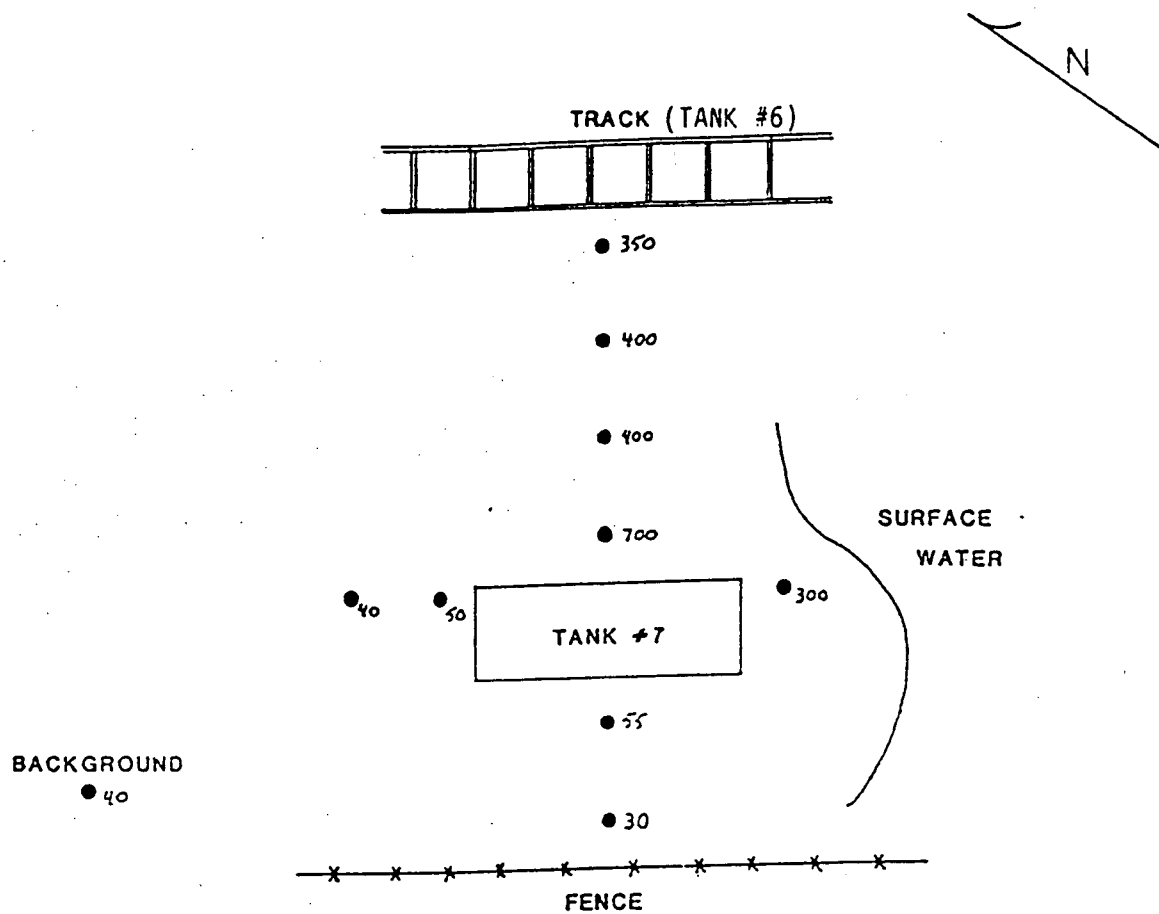
Samples 14, 15, 16, and 17 were analyzed for benzene, toluene, and xylenes by USEPA Method 602.

Sample 6 was analyzed for volatile organic compounds by USEPA Methods 601 and 602, and the base/neutral extractable organic compounds by USEPA Method 625.

Analysis performed by General Testing Corporation of Hackensack, New Jersey (except for base/neutral analysis performed by CompuChem Laboratories of Research Triangle Park, NC).

All concentrations in ppb, except for Total Petroleum Hydrocarbons (in ppm).

16



• Sample Size
OVA Readings (ppm)

SUBJECT			
LOCATION OF SPILL-DELINEATION MONITORING POINTS AROUND THE KEROSENE STORAGE TANK			
PREPARED FOR			
GUIGNON AND GREEN COMPANY, KEARNY, NJ			
Geraghty & Miller, Inc.	COMPILED BY	B. GREY	SCALE
	PREPARED BY	B. GREY	SHOWN
	PROJECT NO.	D. NACHMAN	DATE
			FIGURE 2

BERGEN AVE.

1 STORY
MASONRY

1 STORY MASONRY

RAILROAD TRACKS

STAKE

PAVED
PARKING

MA

FENCE

PAVED
TRAILER
DRUM STORAGE

3

STAKE

NO 40
WAREHOUSE

12 PPK
DRUM STORAGE

13 PPK
DRUM STORAGE

PHC A
15,800

PHC B
15,800

5 PPK
15,100

15 PPK
11,400

14 PPK
10,800

17 PPK
9,200

PHC 10
14,200

11 PPK
5,500

DRUM STORAGE

STAKE

40 ft

- Borings to be Analyzed for Total Petroleum Hydrocarbons
- Borings to be Analyzed for Total Petroleum Hydrocarbons, Benzene, Toluene, Xylene, and Naphthalene
- ▲ Boring to be Analyzed for Total Petroleum Hydrocarbons, Volatile Organic Compounds and Base/Neutral Extractables



Area for Surficial Spill Delineation

SOIL SAMPLING LOCATIONS

PREPARED BY

GUICHON AND GREEN COMPANY, ELIZABETH, NJ

Geraghty & Miller, Inc.	COMPILED BY CR	SCALE	Sheet 1
	PREPARED BY CR	DATE	6/5/86
	INTERVIEWED BY DAN		

ATTACHMENT

C8

GERAGHTY & MILLER, INC.

APPENDIX C

Laboratory Reports



rochester, n.y.

ATTACHMENT C10

hackensack, n.j.

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 8/5/86

Client Geraghty & Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference

Kearny

Date Samples (X) received () collected by General Testing 8/6/86

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. # J1079KN1

[illegible]

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

ATTACHMENT CII

Laboratory Director

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

Job No. H06030 Date 8/5/86

Client Geraghty & Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference

Kearny

Date Samples (X) received () collected by General Testing 8/6/86

P.O. # J1079KN1

(mg/l unless stated otherwise)

[illegible]

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

ATTACHMENT C13

Laboratory Director

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 8/5/86

Client Geraghty & Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ · 07601

Sample(s) Reference

Kearny

Date Samples (X) received () collected by General Testing 8/6/86

P.O. # _____ J1079KN1

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

[illegible]

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

ATTACHMENT

C14

Laboratory Director

86 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

Job No. H06030 Date 8/5/86

Sample(s) Reference

Kearny

Date Samples (X) received () collected by General Testing 8/6/86

P.O. # J1079KN1

(mg/l unless stated otherwise)

[illegible]

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

ATTACHMENT C15

Laboratory Director

general testing corporation

water and was water testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 9/11/86

Client Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference

Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)

Kearny

Date Samples (x) received () collected by General Testing 8/6

P.O. # J1079KN1

ANALYTICAL RESULTS, μ ug/l (ppb)

Sample Description	Boring #6 F *	Field Blank T	Trip Blank U
Analysis * by GC Method 601 (in order of elution)			
Date(s) Collected	8/6	8/6	8/6
Time(s) Collected			
Date Analyzed	8/11	8/12	8/12
Chloromethane	<50	<5	<5
Bromomethane	<50	<5	<5
Dichlorodifluoromethane & Vinyl Chloride **	<50	<5	<5
Chloroethane	<50	<5	<5
Methylene Chloride	<10	5.1	4.4
Trichlorofluoromethane	<10	<1	<1
1,1-Dichloroethene	<10	<1	<1
1,1-Dichloroethane	<10	<1	<1
1,2-Dichloroethene	<10	<1	<1
Chloroform	<10	3.3	<1
1,2-Dichloroethane	<10	<1	<1
1,1,1-Trichloroethane	<10	<1	<1
Carbon Tetrachloride	<10	<1	<1
Bromodichloromethane	<10	<1	<1
1,2-Dichloropropane	<10	<1	<1
1,3-Dichloropropene (Trans)	<10	<1	<1
Trichloroethene	<10	<1	<1
1,3-Dichloropropene (Cis) & Dibromochloromethane & 1,1,2-Trichloroethane **	<20	<2	<2
2-Chloroethylvinyl Ether	<20	<2	<2
Bromoform	<20	<2	<2
1,1,2,2-Tetrachloroethane	<10	<1	<2
Tetrachloroethene	<10	<1	<2
Chlorobenzene	<20	<2	<2
1,3-Dichlorobenzene (m)	<20	<2	<2
1,2-Dichlorobenzene (o)	<20	<2	<2
1,4-Dichlorobenzene (p)	<20	<2	<2

** Elute Together

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack

* Results for Boring #6 are in ug/kg

ATTACHMENT C16

Shirley J. Pineda
Laboratory Director

general testing corporation

water and wastewater testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 9/11/86

Client

Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference

Priority Pollutant Data
7 Purgeable Aromatics

Kearny
Soil Samples

Date Samples (☒) received (☐) collected by General Testing 8/6

P.O. # J1079KN1

ANALYTICAL RESULTS, μ ug/l (ppb)

Sample Description
Analysis * by GC Method 602

Boring #6 Field Blank Trip Blank

	F *	T	U
Date(s) Collected	8/6	8/6	8/6
Time(s) Collected			
Date Analyzed	8/11	8/11	8/11

Benzene	<100	<1	<1
Toluene	460	<1	<1
Ethylbenzene	15,000	<1	<1
Chlorobenzene	<1,000	<2	<2
1,4-Dichlorobenzene	<1,000	<2	<2
1,3-Dichlorobenzene	<1,000	<2	<2
1,2-Dichlorobenzene	<1,000	<2	<2

Additional Compounds eluting but
not on 602 list

p-Xylene	<1,000	<1	<1
m-Xylene	<1,000	<1	<1
o-Xylene	<1,000	<1	<1

* Results for Boring #6 are ug/kg

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145
NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack

ATTACHMENT C17

Laboratory Director

general testing corporation

water and wastewater testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 9/11/86

Client
Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference
Priority Pollutant Data
7 Purgeable Aromatics
Kearny
Soil Samples

Date Samples ☒ received () collected by General Testing 8/6

P.O. # J1079KN1

ANALYTICAL RESULTS, μ ug/l (ppb) All results as ug/kg

Sample Description	Boring #14	Boring #15	Boring #16	Boring #17
Analysis * by GC Method 602	N	O	P	Q
Date(s) Collected	8/6	8/6	8/6	8/6
Time(s) Collected				
Date Analyzed	8/11	8/11	8/13	8/12
Benzene	<5	<5	<5	<100
Toluene	<5	13	<5	1400
Ethylbenzene	<5	<5	<5	<100
Chlorobenzene	<10	<10	<10	<200
1,4-Dichlorobenzene	<10	<10	<10	<200
1,3-Dichlorobenzene	<10	<10	<10	<200
1,2-Dichlorobenzene	<10	<10	<10	<200
Additional Compounds eluting but not on 602 list				
p-Xylene	<5	<5	<5	<100
m-Xylene	<5	<5	<5	<100
o-Xylene	<5	<5	<5	<100
Surrogate Standard Recovery: a,a,a, trifluorotoluene	100%	99%	-	92%

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack

ATTACHMENT C18

Barney J. P. A.
Laboratory Director

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

Job No. H06030 Date 9/11/86

Kearny Soil Samples

8/6

(mg/l unless stated otherwise)

P.O. # _____

[illegible]

Laboratory Director

general testing corporation

water and wastewater testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-6242

LABORATORY REPORT

Job No. HO Date

Client

Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference

Kearny
Soil Samples
Petroleum Hydrocarbon
Quality Assurance Data

Date Samples (X) received () collected by General Testing 8/6

P.O. #

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

Sample Description		REPLICATE VALUES		SPIKE RECOVERIES	
Units are as ug/g wet weight.				Amount	%
Date(s)				Added	Recovery
Time(s)					
SAMPLE #	SAMPLE LOCATION				
6030 I	Boring #9	<30.0	<29.9	184	96.2%
6030 O	Boring #15	1190	1190	400	102%
EPA STANDARD RECOVERY -(For EPA 379-2 for oil and grease as determined by the IR spectrophotometric method.)					
TRUE VALUE		95% CONFIDENCE INTERVAL		AMOUNT RECOVERED	
12.0mg/l		16.6 - 23.4mg/l		19.3 mg/l	
The IR method produces results which are not identical to those of the gravimetric method. The IR method is based on the absorbance characteristics of C-H bonding. Identical results between IR and gravimetric methods will only occur when the sample and standards have the same chemical composition.					

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

ATTACHMENT C20

Laboratory Director

general testing corporation

water and wastewater testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 9/11/86

Client
Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference

Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)

Kearny
Quality Assurance Data

Date Samples () received () collected by General Testing

P.O. # _____

ANALYTICAL RESULTS, μ ug/l (ppb)

Sample Description

Laboratory
Blank

Analysis * by GC Method 601
(in order of elution)

Date(s) Collected

Time(s) Collected

Date Analyzed

8/12

1-1 Chloromethane
1-1 Bromomethane
1-1 Dichlorodifluoromethane &
1-4 Vinyl Chloride **
1-1 Chloroethane
1-1 Methylene Chloride
1-7 Trichlorofluoromethane
1-8 1,1-Dichloroethene
1-1 1,1-Dichloroethane
1-1 1,2-Dichloroethene
1-11 Chloroform
1-1 1,2-Dichloroethane
1-1 1,1,1-Trichloroethane
1-14 Carbon Tetrachloride
1-16 Bromodichloromethane
1-1 1,2-Dichloropropane
1-17 1,3-Dichloropropene (Trans)
1-18 Trichloroethene
1-1 1,3-Dichloropropene (Cis) &
2-1 Dibromochloromethane &
2-1 1,1,2-Trichloroethane **
2-1 2-Chloroethylvinyl Ether
2-1 Bromoform
2-1 1,1,2,2-Tetrachloroethane
2-1 Tetrachloroethene
2-1 Chlorobenzene
2-1 1,3-Dichlorobenzene (m)
2-1 1,2-Dichlorobenzene (o)
2-1 1,4-Dichlorobenzene (p)

<5

<5

<5

<5

<5

4.1

<1

<1

<1

<1

<1

<1

<1

<1

<1

<1

<1

<1

<2

<2

<2

<2

<1

<1

<1

<2

<2

<2

<2

** Elute Together

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack

ATTACHMENT C21

Laboratory Director

general testing corporation

water and was water testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 9/11/86

Client Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ

Sample(s) Reference
Priority Pollutant Data
7 Purgeable Aromatics

Kearny
Soil Samples
Quality Assurance Results
Boring #16

Date Samples (X) received () collected by General Testing 8/6

P.O. # _____

ANALYTICAL RESULTS, μ ug/l (ppb) All Results as ug/kg

Sample Description Analysis * by GC Method 602	P Replicate	Spike Recovery	
		Amount Added	% Recovery
Date(s) Collected			
Time(s) Collected			
Date Analyzed	8/12		
Benzene	<5	27.0	81%
Toluene	<5	34.0	99%
Ethylbenzene	<5	51.9	99%
Chlorobenzene	<10		
1,4-Dichlorobenzene	<10		
1,3-Dichlorobenzene	<10		
1,2-Dichlorobenzene	<10		
Additional Compounds eluting but not on 602 list			
p-Xylene	<5		
m-Xylene	<5	45.7	74%
o-Xylene	<5	106	88%

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack

ATTACHMENT C22

Laboratory Director

general testing corporation

water and waste water testing specialists

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Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 9/11/86

Client Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference
Priority Pollutant Data
7 Purgeable Aromatics

Kearny
Quality Assurance Data
% Recovery of EPA Standard

Date Samples () received () collected by General Testing

P.O. # _____

ANALYTICAL RESULTS, μ g/l (ppb)

Sample Description
Analysis * by GC Method 602

True
Value %
Recovery

Date(s) Collected
Time(s) Collected
Date Analyzed

Benzene 30.7 84%

Toluene 4.1 102%

Ethylbenzene 11.5 100%

Chlorobenzene

1,4-Dichlorobenzene

1,3-Dichlorobenzene

1,2-Dichlorobenzene

Additional Compounds eluting but
not on 602 list

p-Xylene

m-Xylene 42.6 96%

o-Xylene 29.7 110%

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack

ATTACHMENT C23

Laboratory Director

general testing corporation

water and wastewater testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 9/11/86

Client
Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference
Priority Pollutant Data
7 Purgeable Aromatics
Kearny
Quality Assurance Data

Date Samples () received () collected by General Testing

P.O. # _____

ANALYTICAL RESULTS, μ ug/l (ppb)

Sample Description
Analysis * by GC Method 602

Laboratory
Blank

Date(s) Collected

Time(s) Collected

Date Analyzed

8/12

Benzene

<1

Toluene

<1

Ethylbenzene

<1

Chlorobenzene

<2

1,4-Dichlorobenzene

<2

1,3-Dichlorobenzene

<2

1,2-Dichlorobenzene

<2

Additional Compounds eluting but
not on 602 list

p-Xylene

<1

m-Xylene

<1

o-Xylene

<1

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack

ATTACHMENT C24

Laboratory Director

general testing corporation

water and wastewater testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. H06030 Date 9/11/86

Client Geraghty and Miller
Mr. Dan Nachman
7 Atlantic Street
Hackensack, NJ 07601

Sample(s) Reference

Surrogate Standard Recoveries
For EPA Method 601/602

Date Samples () received () collected by General Testing

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. # _____

Sample Description

Boring #6

Laboratory
Blank

Field Blank

Trip Blank

F

T

U

Date(s)

Time(s)

% RECOVERY:

Bromochloromethane

116%

102%

108%

82%

2-Bromo-1-chloropropane

105%

114%

112%

83%

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack.

ATTACHMENT C25

Danach J. P. [Signature]
Laboratory Director



710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

Job No. H06030 Date 9/11/86

Sample(s) Reference
Kearny
Soil Samples
Quality Assurance Data
Boring #17

Date Samples () received () collected by General Testing

P.O. # _____

(mg/l unless stated otherwise)

[illegible]

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

ATTACHMENT C26

Laboratory Director



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Chronicle

Method Reference

Data Summary

- . Base/Neutral Extractables

Quality Control Summary

Quality Assurance Notices*

Chain of Custody**

Exhibits

- . Base/Neutral Reconstructed Ion Chromatogram (RIC)
- . Spectra for compounds present above detection limit
- . Base/Neutral Shift Standard RIC

*These notices are included where appropriate for data qualification.

**When the original chain of custody is submitted with the sample(s), a copy of it is included with the report.

METHOD REFERENCE

For the initial sample preparation, CompuChem employs a modification of the current EPA Contract Laboratory Program (CLP) procedure for the Determination of Low Levels of Semivolatile Organics in Soil and Sediments. Further sample preparation, specifically the extract partitioning technique, is taken from the second edition of "The Test Methods For Evaluating Solid Waste", SW-846. Analysis for the acid and base/neutral priority pollutants is performed in accordance with USEPA Method 625 Volume 49, October 26, 1984.

Method Summary

A nominal amount of sample, approximately 30 grams, is mixed with (anhydrous) sodium sulfate and serially extracted with a 50/50 mixture of methylene chloride and acetone using sonication. The solvent extract is then concentrated and partitioned into separate base/neutral and acid extracts. The base/neutral extract is generated by washing the solvent extract with a basic (pH greater than 11) water wash which removes the acid constituents from the organic extract. The organic extract, now containing only base/neutral compounds, is then dried and concentrated. The pH of the aqueous basic wash is adjusted to less than 2 and serially extracted with methylene chloride. The methylene chloride containing the acid compounds is dried and concentrated.

Qualitative identification is performed using the retention time and the relative abundance of three characteristic ions. Quantitative analysis is performed using either external or internal standard techniques.

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: HO-6030-F
COMPUCHEM® SAMPLE NUMBER: 95781

	CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)	SCAN NUMBER
1B. N-NITROSODIMETHYLAMINE	BDL	330	
2B. BIS (2-CHLOROETHYL) ETHER	BDL	330	
3B. 1,3-DICHLOROBENZENE	BDL	330	
4B. 1,4-DICHLOROBENZENE	BDL	330	
5B. 1,2-DICHLOROBENZENE	BDL	330	
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	330	
7B. N-NITROSODI-N-PROPYLAMINE	BDL	330	
8B. HEXACHLOROETHANE	BDL	330	
9B. NITROBENZENE	BDL	330	
10B. ISOPHORONE	BDL	330	
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	330	
12B. 1,2,4-TRICHLOROBENZENE	BDL	330	
13B. NAPHTHALENE	BDL	330	
14B. HEXACHLOROBUTADIENE	BDL	330	
15B. HEXACHLOROCYCLOPENTADIENE	BDL	330	
16B. 2-CHLORONAPHTHALENE	BDL	330	
17B. DIMETHYLPHTHALATE	BDL	330	
18B. ACENAPHTHYLENE	BDL	330	
19B. 2,6-DINITROTOLUENE	BDL	330	
20B. ACENAPHTHENE	BDL	330	
21B. 2,4-DINITROTOLUENE	BDL	330	
22B. DIETHYLPHTHALATE	BDL	330	
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	330	
24B. FLUORENE	BDL	330	
25B. DIPHENYLAMINE (N-NITROSO)	BDL	330	
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	330	
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	330	
28B. HEXACHLOROBENZENE	BDL	330	

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: HO-6030-F
 COMPUCEM® SAMPLE NUMBER: 95781

	CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)	SCAN NUMBER
29B. PHENANTHRENE	1200	330	909
30B. ANTHRACENE	BDL	330	
31B. DI-N-BUTYLPHTHALATE	BDL	330	
32B. FLUORANTHENE	720	330	1028
33B. PYRENE	700	330	1049
34B. BENZIDINE	BDL	1600	
35B. BUTYLBENZYLPHTHALATE	BDL	330	
36B. 3,3'-DICHLOROBENZIDINE	BDL	660	
37B. BENZO(A)ANTHRACENE	220 J	330	1170
38B. BIS(2-ETHYLHEXYL)PHTHALATE	1200	330	1186
39B. CHRYSENE	370	330	1174
40B. DI-N-OCTYLPHTHALATE	BDL	330	
41B. BENZO(B)FLUORANTHENE	BDL	330	
42B. BENZO(K)FLUORANTHENE	BDL	330	
43B. BENZO(A)PYRENE	BDL	330	
44B. INDENO(1,2,3-C,D)PYRENE	BDL	330	
45B. DIBENZO(A,H)ANTHRACENE	BDL	330	
46B. BENZO(G,H,I)PERYLENE	BDL	330	

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	<u>41</u>	<u>(20-140)</u>
2-Fluorobiphenyl	<u>32</u>	<u>(20-140)</u>
D ₁₄ -Terphenyl	<u>30</u>	<u>(20-150)</u>
D ₁₀ -Pyrene*	<u>35</u>	<u>*</u>

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range.

J=Estimated concentration; values are between the detection limit and one-half of that limit.

ATTACHMENT C30

QUALITY CONTROL SUMMARY

SAMPLE IDENTIFIER: H0-6030-F
COMPUCHEM® SAMPLE NUMBER: 95781

BASE/NEUTRAL

	<u>NUMBER</u>	<u>ACCEPTANCE CRITERIA</u>
Blank	95971	OK
Blank Spike	95783	OK
Sample Spike	95782	**
DFTPP*	DF860814C07	OK
Shift Standard	BT860814C07	OK

*The tuning calibration compound, Decafluorotriphenylphosphine, is
is used for the base/neutral instruments.

**See Quality Assurance Notice

ATTACHMENT C3L

QUALITY ASSURANCE NOTICE
sample spike #95782 original #95781
blank spike #95783 fraction Base/Neutral

Recoveries for the surrogate and/or spike compounds listed below were outside acceptance criteria in the matrix spike prepared from this sample. A Quality Control blank spike was prepared and analyzed with this batch of samples, and all spike and surrogate recovery criteria were met. In addition, surrogate recoveries in the original sample were comparable to those in the matrix spike.

We have attributed the unacceptable recoveries in the matrix spike and original sample to the sample matrix, since recoveries in the blank and blank spike prepared with these samples were acceptable. These data are being reported with reference to this qualifier.

compound

1,2-dichlorobenzene
bis(2-chlorisopropyl)ether
bis (2-chloroethoxy)methane
naphthalene
chloronaphthalene
2,6-dinitrotoluene
fluorene
4-bromophenyl phenylether
phenanthrene
anthracene
pyrene
benzo(A)anthracene
05-nitrobenzene

data reviewer LLF

date 09/04/86

ATTACHMENT C32

ATTACHMENT D



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

John J. Treia, Ph.D., Acting Director
 401 East State St.
 CN 028
 Trenton, N.J. 08625
 609-633-1408

Certified Mail
 Return Receipt Requested

JAN 20 1987

Frank A. Darabi, P.E.
 Darabi & Associates, Inc.
 730 North Waldo Road
 Gainesville, Florida 32601

Dear Mr. Darabi:

Re: Guignon & Green Co.
 Kearny Town, Hudson County
 ECRA Case #86034

The following comments concern the Department's review of the Analytical Data (received October 15, 1986) for sampling conducted at the referenced facility. This sampling was implemented without the Department's written approval.

1. Analytical Data; Several problems with the analytical data were noted and are listed below.

- A) Replicate samples 18 and 19, corresponding to samples 7 and 4, respectively, indicate a high degree of inconsistency, either in the sampling or analysis of the samples:

<u>Sample #</u>	<u>PHC conc. (PPM)</u>
4	14,800
19*	36,800
7	720
18*	262

*replicate

- B) Sample #6, the only sample analyzed for priority pollutant volatile organics was analyzed by EPA methods, 601-602, which are GC scans, but do not include MS identification and quantitative analysis. The data will be accepted as an indication of the presence of contaminants as several volatile components of gasoline, kerosene and #2 oil were detected. Final delineation of the extent of the contamination shall include analyses of volatile organics + 15 and base/neutrals + 15 by GC/MS methods (USEPA methods 8240 and 8250, respectively, as described in SW 846).

- C) Samples 6, 14, 15, 16 and 17, were all analyzed by EPA methods, 601-602, but there are several different minimum detection limits listed. The data for samples 14 through 17 are not considered representative of the nature of the contamination in the soils at these locations because some contamination was detected in some samples, and the variation in detection limits listed and the limitation of the identification and quantification capabilities of the analytical methods used renders the data presented suspect.
- D) The chromatogram and attendant Mass Spectral breakdown of sample number 6, for base/neutrals + 15 by EPA method 8250 (625), shows a highly irregular background level which suggests baseline drift in the equipment, but could also be attributed to an interference. In addition to the peaks identified as internal standards or surrogates there are numerous unidentified peaks.
- The mass spectra for sample 6 include an identification of pyrene (not reported in Table 1) and an unidentified compound.
- E) The concentration of petroleum hydrocarbons in soil samples listed in Table 1 was reported in ppm wet weight. The concentration of all data generated from soil sampling shall be reported on a dry weight basis for all future submittals.

As mentioned in item B, above, these data will be accepted only as an indication of the presence of contaminants, and not as a final determination of the compounds present or their concentrations. All future data reporting shall conform to the NJDEP Tier II deliverables reporting procedures. This shall include all blanks (method, field and trip), GC/MS tune records, and the proper labelling of all chromatographic peaks. Also, all pertinent QA/QC data, chromatograms and calculations shall be submitted.

- 2) Delineation of Contamination Resulting from a Kerosene/Mineral Spirits Spill Around Tank Seven; Ten samples were collected from this area which were field analyzed by an OVA. Geharty and Miller personnel were notified by telephone and by letter that OVA readings would only be acceptable as field indications of the presence of contamination in the soil. Any OVA data generated would need to be verified by collection of a soil sample and quantitative analysis in a New Jersey certified lab. They were also informed that a reading of ND on the OVA would not be acceptable as certifying a location as being free of organic contaminants. Therefore the limits of the spill have not been properly determined.

The consultant took a "background" reading on the OVA from a nearby location and used the number generated (40ppm) to determine the extent of the spill area. The readings, displayed in text figure #2 of the report, indicate the relative abundance of contaminants and the general direction of the spill run-off, but do not reflect the absolute concentrations or the boundaries of contamination because of the limitations on the usefulness of OVA data, explained above.

In this survey no samples were screened from the surface water body shown on the map, or from the area of the RR tracks. The proximity of the surface water indicates a high water table, (believed to be approximately one to two feet below grade), and the elevated concentrations of organic contaminants detected in the OVA readings suggest that the ground water and surface water are probably contaminated.

Due to the high water table and proximity of the spill to the surface water body a ground/surface water investigation shall be proposed to determine the impact of the soil contamination on the hydrologic system before implementing a second soil sampling episode. The data submitted has been referred over to the Division of Water Resources for review and comment.

Future soil sampling efforts shall be directed toward determining the horizontal extent of the contamination. This shall include additional samples in the direction of the RR siding and sediment samples from the surface water body.

All soil and water samples shall be analyzed for petroleum hydrocarbons, base/neutrals + 15 (method 8250) and volatile organics + 15 (method 8240) at a minimum.

- 3) Interpretation of Results; The assumption that the impact from the fuel spill near tank 7 is minimal is inappropriate in light of the analytical data and preliminary scan of organic contaminants by the OVA. The reason for this are: the OVA indicated higher values in the soils than were indicated by the lab, the questionable QA/QC practices displayed in the submitted analytical results, discussed in item 1 of this memo, suggest that the data from locations 14-17 are not indicative of true contaminant levels. Also, the spill was a low viscosity liquid which probably migrated easily through the sandy soil. The 18"-24" sample collection depth recommended by the department was analyzed and the analyses revealed some contamination. Additional sampling to determine the extent and concentration of any contamination present shall now be proposed which is to be in conformance with all current regulations and guidelines. A copy of this Bureau's "Draft Sampling Plan Guide" is included for your reference.


It is not acceptable, without documentation, to suggest that the high levels of petroleum hydrocarbons detected at all locations on the site are the result of non-hazardous hydrocarbons, such as "turpentine, fatty acids and other related compounds". The consultant then goes on to point out that method 418.1 is a "broad scan" which "will detect a variety of... hydrocarbons". The method 418.1 will not detect non petroleum hydrocarbons like the older oil and grease analysis would. Therefore, this claim is inappropriate.

The presence of ethylbenzene and Toluene and "a few base/neutral compounds" at location 6 is attributed to "a small leak or spill associated with the fuel oil storage area". The levels of these compounds range from .22 to 15 ppm each, which does not necessarily indicate a small leak.

A new Sampling Plan (accompanied by a \$1,000.00 Sampling Plan review fee) for determining the horizontal and vertical extent of the contaminated areas found during the first round of sampling is now due within 30 days from your receipt of this letter. This new plan shall include a proposal to determine the extent of any contamination of the ground and surface waters on site.

Be advised that this document has been prepared by the case manager, Michael Metlitz. Any questions concerning this document should be directed to him at 609-633-7141.

Very truly yours,


Joseph R. Fallon, Assistant Chief
Bureau of Industrial Site Evaluation

E25:dg

cc: Tom Gillespie, BEERA
Walt Samsel, DWR, NJGS
Daniel Nachman, Senior Scientist
Geraghty & Miller, Inc.
7 Atlantic Street
Hackensack, NJ 07601

attachments

ATTACHMENT E

RESULTS OF THE ECRA SITE INVESTIGATION
AT THE GUIGNON & GREEN FACILITY,
KEARNY, NEW JERSEY

June³, 88

Geraghty & Miller, Inc.
7 Atlantic Street
Hackensack, NJ 07601

GERAGHTY & MILLER, INC.

ATTACHMENT E1

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2. Field Parameter Measurements
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4. Water-Level Measurements
5. Concentrations of Priority Pollutant Organic Compounds in Ground-Water Samples
6. Concentrations of Priority Pollutant Organic Compounds in Soil Samples
7. Concentrations of Priority Pollutant Organic Compounds in Surface Water Samples
8. Concentrations of Priority Pollutant Organic Compounds in Ditch Sediment Samples.

FIGURES

1. Monitoring Well and Sampling Point Locations
2. Representative Monitoring Well Construction Diagram
3. Water-Level Contour Map, March 16, 1988
4. Hydrograph, March 8 - March 24, 1988 for MW-4

APPENDICES

- A. Work Plan of April 21, 1987 and NUDEP Letter of August 21, 1987
- B. Generalized Geologic Logs
- C. Well Inventory
- D. Envirotech Research, Inc. Laboratory Reports (Separate Volumes D-1, D-2 and D-3)

#J1079KN2/040188.

RESULTS OF THE ECRA SITE INVESTIGATION

AT THE GUIGNON & GREEN FACILITY,

KEARNY, NEW JERSEY

INTRODUCTION

In May 1986, Guignon & Green retained Geraghty & Miller, Inc. to prepare and implement an initial soil quality assessment sampling plan at the Guignon & Green facility in Kearny, New Jersey, in accordance with the investigative requirements of the Environmental Cleanup Responsibility Act (ECRA) of the State of New Jersey (ECRA Case No. 86034). The results of this assessment were submitted to the New Jersey Department of Environmental Protection (NJDEP) in October 1986.

The results of the initial assessment were discussed at a meeting held at the NJDEP offices in Trenton, New Jersey on February 20, 1987. At this meeting, NJDEP indicated that additional investigative activities would be required. In response to this request, Geraghty & Miller, Inc. submitted a workplan for a ground-water quality investigation to NJDEP in April 1987. This workplan was approved with conditions by the NJDEP, as stated in a letter dated August 21, 1987. The workplan and NJDEP's letter are presented in Appendix A. The investigation was carried out from January through March 1988 in accordance with the workplan and NJDEP's specified conditions. This report summarizes the results of the investigation.

ATTACHMENT E4

FIELD PROGRAM

Installation of Monitoring Wells

From January 15 to January 20, 1988 four monitoring wells (MW-1 through MW-4) were installed in accordance with the protocol outlined in the workplan (Appendix A). One well, MW-1, is located in the upgradient portion of the site, and the three other wells are situated in downgradient locations. Monitoring well locations are shown on Figure 1.

The wells were drilled using the hollow stem auger method by a licensed driller in the employ of Environmental Drilling, Inc. of Mount Arlington, New Jersey. Continuous split spoon samples were collected for the entire length of each monitoring well boring; the monitoring wells are all approximately 13 to 14 feet deep. A Geraghty & Miller, Inc. hydrogeologist logged and described geologic samples and supervised monitoring well installation. Geologic logs for the monitoring wells are presented in Appendix B. An NJDEP geologist was on site on January 15, 1988 to observe drilling and sampling methods.

The monitoring wells were constructed with four-inch diameter, flush-jointed PVC casings and factory-slotted screens with slot openings of 0.010 inch. The tops of the well screens were placed at least one foot above the encountered water table in order to ensure the detection of any floating fuel (product), if present. In each

well a sand pack was emplaced in the annular space around the four-inch diameter screen, extending from the bottom of the borehole to at least one-half foot above the top of the well screen. A layer of bentonite pellets, at least one-half foot thick, was placed in the annular space above the sand. Six-inch diameter protective steel casing with a locking cap was cemented in the ground around the PVC casing of each well. Protective and stabilizing cement bunkers two feet high and 18 inches in diameter were built around the wells. Well construction details for each well are summarized in Table 1, and a representative monitoring well construction diagram is shown on Figure 2.

No
way
I have
seen these
wells no
bunkers

On January 20, 1988 each monitoring well was developed with a submersible pump for two hours to remove fine-grained material from the sand pack and the adjacent formation, in order to ensure adequate interconnection between the wells and the water-bearing formation.

Surface Water and Sediment Sampling

On February 25, 1988 surface water and sediment samples were collected from the ditch on the west side of the site. As approved by NJDEP, this activity was delayed because of episodes of precipitation and long-standing thick ice in the ditch that would have prevented the collection of representative water samples.

ATTACHMENT E6

Sampling was carried out in accordance with procedures outlined in the April 1987 workplan (Appendix A). Representative surface water and sediment samples were collected at three locations in the ditch -- in the upstream, downstream, and the middle portions of the site. The sampling locations are shown in Figure 1.

At each location, surface water samples were collected before the sediment samples to avoid introducing sediment into the surface water being sampled. A field blank was collected for analysis for all specified parameters. Field parameters (temperature, specific conductance, and pH) were measured at each location; these measurements are summarized in Table 2. The samples were packed in ice, shipped, and received by Envirotech Research, Inc. in Edison, New Jersey. Analytical parameters for surface water and sediment samples are listed in Table 3.

Ground-Water Sampling

The four monitoring wells were sampled on February 9, 1988 by Geraghty & Miller, Inc. hydrogeologists in accordance with the protocols outlined in the April 1987 workplan and the NJDEP's letter of August 1987 (Appendix A). A blind replicate sample was collected from monitoring well MW-4 and was labelled MW-5; a field blank was also collected. Field parameters (pH, temperature, and specific conductance) were measured at each well; these measurements are

summarized in Table 2. The samples were packed in ice and shipped to Envirotech Research, Inc. in Edison, New Jersey. The ground-water samples were analyzed for the same parameters as surface water listed shown in Table 3 for surface water.

Soil Sampling

On January 14, 1988 soil samples were collected from Boring 101 and MW-3 at depths of 0 to 6 inches and 12 to 18 inches. A hand auger was used to collect the shallow (0 to 6 inches) soil samples. Due to hard compacted soil conditions, a hollow stem auger was used to drill holes to a depth of 12 inches in each boring. The deeper (12 to 18 inches) soil samples were subsequently collected with a hand auger. Representative samples were transferred to sample bottles in accordance with the protocol outlined in the April 1987 workplan and the modifications specified in the NJDEP's letter of August 1987 (Appendix A). The samples were packed in ice and shipped to Envirotech Research, Inc. Each shallow (0 to 6 inches) soil sample was analyzed for total petroleum hydrocarbons (TPHC) and base/neutral extractable (B/N) compounds; the deeper (12 to 18 inches) samples were analyzed for volatile organic compounds (VOCs). Analytical parameters are listed in Table 3.

Water-Level Measurements

On February 25, 1988, a staff gauge was installed in the ditch at the location shown on Figure 1. Relative locations and elevations of

REGIONAL HYDROGEOLOGIC CONDITIONS

Ground-Water Use

An inventory of nearby wells was procured from the NUDEP. This inventory included a map that depicts water withdrawal points located within a one-mile and a five-mile radius of the Guignon & Green facility. The inventory and accompanying map are provided in Appendix C. Only one supply well was identified within a one-mile radius. This well, and the majority of the other wells within the area, derive water from the bedrock Brunswick Group. These Brunswick wells are on the order of 300 to 400 feet deep. The Brunswick Formation in the vicinity of the Guignon & Green facility is overlain by approximately 100 and 300 feet of unconsolidated deposits (State of New Jersey, 1968; New Jersey Geological Survey, 1959).

Geology

The Guignon & Green site is located near the western margin of the Hackensack meadows (New Jersey Geological Survey, 1959). Regionally, the uppermost deposits consist of peat or meadow mat admixed with fine-grained sediments deposited in a marshland environment. Underlying this organically rich upper layer are clay and silt deposits associated with sedimentation in glacial Lake Hackensack that occupied the region 10,000 to 15,000 years ago. The fine-grained lake deposits are in turn underlain by glacial till composed mostly of sand and gravel (Agron, 1981).

The bedrock beneath these unconsolidated sediments consists of shale and sandstone of the Passaic Formation of the Brunswick Group (Lyttle and Epstein, 1987). The bedrock is exposed approximately 0.5 mile to the west of the Guignon & Green site; the bedrock surface slopes steeply to the east toward the Hackensack River valley (New Jersey Geological Survey, 1959; State of New Jersey, 1968).

SITE HYDROGEOLOGIC CONDITIONS

Geology

Shallow site-specific geology, to a depth of fourteen feet, has been defined from the geologic logs compiled during the drilling of the monitoring wells (Appendix B). The near surface stratigraphy at the site generally consists of three layers, as follows:

- an uppermost fill layer of variable composition (including fragments of basalt, cement, coal, and ash) in a matrix composed principally of silt, fine sand and some gravel. This layer extends from ground surface to depths of two to four feet below ground surface.
- a layer of fine sediments, dominantly clay and also silt; the upper part of this layer contains peat and other organic materials.
- a well-sorted fine- to medium-grained light grayish brown sand. The top of this sand layer was encountered between seven and ten feet below land surface. It is not known how far this sand extends below a depth of fourteen feet.

Ground-Water Flow Conditions

Figure 3 depicts a water-level contour map for the facility. Water-level measurements in the monitoring wells indicate a gentle ground-water flow gradient to the southeast. Based on measurements at the staff gauge, water levels at the east end of the ditch (which terminates in a larger and deeper body of water) appear to be higher than ground-water elevations under the Guignon & Green facility.

The water table at the site was within a few feet of ground surface during the field investigation. Ponded surface water bodies also occur in the area surrounding the site. It is uncertain whether these surface water bodies (including the pond adjacent to the drainage ditch) are interconnected and form a drainage network or are stagnant ponds that periodically receive surface water runoff. It should be noted that the ditches and ponds have periodically overflowed, flooding substantial portions of the subject site.

Tidal Influence

A water-level recorder was installed on monitoring well MW-4 from March 8 to March 23, 1988 to provide a continuous record of water levels. Figure 4 shows the water-level hydrograph for this period.

During this time, daily precipitation each day was zero or less than 0.01 inch per day, except for March 10, 1988 when precipitation was 0.01 inch and March 20, 1988 when precipitation was 0.06 inch. In the week prior to March 8, 1988, precipitation greater than 0.01 inch occurred on two days: 0.20 inch on March 3 and 0.82 inch on March 4, 1988 (Newark Airport Station, National Weather Bureau). There are no discernible patterns that would indicate tidal influences on the water-level hydrograph. Shore and near-shore environments in the northeastern United States exhibit two high and two low tides a day. The fluctuations observed on the water-level hydrograph may be due to changes in barometric pressure or other factors.

GROUND-WATER QUALITY

Ground-water samples were collected and sent to Envirotech Research, Inc. for analysis for VOCs, B/N compounds, and total petroleum hydrocarbons. No TPHC concentrations were detected in any of the samples above the detection limit of 1.0 mg/L.

Concentrations of VOCs and B/N compounds are summarized in Table 5; complete laboratory reports are included in Appendix D. Monitoring wells MW-2 and MW-3 had total VOC concentrations of 44 and 31 micrograms per liter (ug/L), respectively. The other two monitoring wells had total VOC concentrations below 16 ug/L. The principal VOC detected in MW-2 and MW-3 was vinyl chloride, which is a potential breakdown solvent of trichlorethene and dichloroethene. Reportedly, none of these chlorinated solvents were used at the facility. No individual Priority Pollutant B/N compounds were detected above the detection limit of 10 ug/L, except for bis (2-ethylhexyl) phthalate, at a concentration of 41.9 ug/L in the duplicate sample from monitoring well MW-4. This compound, used as a plasticizer, is a common sampling and/or laboratory artifact, and its relative absence in the other sample collected from the same monitoring well indicates that it may not actually be present in ground water.

SOIL QUALITY

Analytical data for soil samples from soil boring 101 and the boring for MW-3 are summarized in Table 6. The complete laboratory reports are included in Appendix D.

The principal VOCs identified in the sample from MW-3 were toluene, at a concentration of 550 ppb, and xylenes, at a concentration of 48 ppb. No Priority Pollutant VOCs were identified in the sample from SB-101 or its laboratory-blind replicate, SB-102. However, detection limits for SB-101 and SB-102 were high, due to the detection of non-priority Pollutant VOCs.

Priority Pollutant B/N compounds detected in soil samples from Soil Boring 101 and the boring for MW-3 are also summarized in Table 6. Identified compounds found in greatest concentrations were phenanthrene, fluoranthene, pyrene and benzo(b)fluoranthene.

TPHC concentrations detected in the soil samples from Soil Boring 101 and the location of MW-3 were 149 milligrams per kilogram (mg/kg) and 110 mg/kg respectively (Table 6).

SURFACE WATER AND SEDIMENT QUALITY

Surface Water

Analytical data for the surface water samples collected from the drainage ditch are summarized in Table 7; the complete laboratory reports are included in Appendix D.

No Priority Pollutant VOCs were found above detection limits were in samples M-2 and U-2. In sample D-1, trichloroethene and trans-1,2-dichloroethene were detected in concentrations of 60.3 ug/L and 38 ug/L, respectively.

No Priority Pollutant B/N compounds were identified in concentrations above detection limits in any of the surface-water samples from the ditch. Petroleum hydrocarbons were found only in the upstream sample, U-1, at a concentration of 1.1 mg/liter.

Ditch Sediment

Analytical data for sediment samples collected from the drainage ditch are summarized in Table 8; complete laboratory reports are included in Appendix D.

Priority Pollutant VOCs were detected in all three samples; total VOC concentrations ranged from 101 to 153 ug/L (since trichlorofluoromethane was detected in the laboratory blank, it was not included in the VOC total). The highest total VOC concentration was detected in the upstream sample.

Priority Pollutant B/N compounds were found in all three sediment samples. The TPHC concentrations ranged from 43 to 797 mg/kg.

ATTACHMENT E15

SURROUNDING LAND USE

Several commercial and industrial facilities are located upstream along the ditch that runs adjacent to the Guignon & Green facility. Field reconnaissance indicated that the property across the ditch to the south has been the site of refuse disposal. The depth of refuse fill is not known; however, various kinds of debris (construction rubble, bottles, drums, cans, etc.) are visible at land surface and along the ditch itself.

Numerous contamination incidents in Kearny, New Jersey have been reported and are under investigation by NJDEP. These contamination incidents have reportedly involved disposal of organic solvents, fuel oils, metals, and other pollutants to land surface, ground water, and surface-water.

CONCLUSIONS

- o The site is located in the vicinity of bodies of ponded surface water. The water table under the site was encountered at depths of one to three feet below ground surface. The ditch and pond adjacent to the site have periodically overflowed, flooding substantial portions of the site.
- o Underlying sediments include a near-surface clay layer, present at the locations of all four monitoring wells.
- o Ground-water flow appears to be to the south. Surface water elevations were higher than ground-water elevations during the field program. No tidal effects on ground-water level behavior were discernible.
- o Surface water elevations were measured to be higher than ground-water elevations during the field program. The adjacent ditch has overflowed and flooded portions of the site periodically in the past.
- o Low concentrations of Priority Pollutant VOCs and B/N compounds in ground water and soil have been found. The VOC detected in highest concentration was vinyl chloride; chlorinated solvents were reportedly not used at the site. The concentrations detected do not warrant clean-up activity. It is possible that these compounds may have been brought on-site as a result of flooding from the adjacent ditch and pond.
- o Some VOCs and B/N compounds were detected in surface-water samples and sediment samples collected from the ditch adjacent to the facility. The source of these compounds

cannot be determined at present; there are several potential off-site sources located across and along the ditch.

- o Based on the data gathered during the field investigation, operations at the facility have not had an impact on environmental quality, and a negative declaration appears to be in order.

Respectfully submitted,

GERAGHTY & MILLER, INC.

Camille Mancuso

Camille Mancuso
Scientist


Daniel A. Nachman
Associate

#NJ1079KN2/040188.

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TABLE 1: WELL CONSTRUCTION DETAILS

Well Number	Date Installed	Casing and Screen Diameter (inches)	Casing and Screen Material	Depth of Boring (ft bls)	Screen Interval (ft bls)	Screen Slot Size (inch)	Bentonite Pellets (ft bls)
MW-1	1-15-88	4	PVC	14.0	1.5 - 11.5	0.010	0.5 - 1.0
MW-2	1-19-88	4	PVC	13.0	2.0 - 12.0	0.010	0.5 - 1.5
MW-3	1-14-88	4	PVC	14.0	2.0 - 12.0	0.010	0.3 - 1.0
MW-4	1-19-88	4	PVC	13.0	2.0 - 12.0	0.010	0.5 - 1.5

Notes:

ft = feet.
bls = below land surface.
TOC = top of casing.

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TABLE 2: FIELD PARAMETER MEASUREMENTS

Sampling Point	pH	Specific Conductance (umhos/cm)	Temperature (in degrees Centigrade)
SURFACE WATER:			
D-1	6.7	1540	NA
M-2	6.3	630	5
U-3	6.25	770	4
GROUND WATER:			
MW-1	8.4	170	9
MW-2	NA	750	9
MW-3	NA	1500	5
MW-4	NA	1400	6

NA - not measured; pH meter malfunctioned (perhaps due to extreme cold conditions during sampling).

TABLE 3: ANALYTICAL PARAMETERS

Sample Number	Date	Analytical Parameters
Ground Water:		
MW-1	2/9/88	VOCs & 15, B/N & 15, TPHC
MW-2	2/9/88	VOCs & 15, B/N & 15, TPHC
MW-3	2/9/88	VOCs & 15, B/N & 15, TPHC
MW-4	2/9/88	VOCs & 15, B/N & 15, TPHC
MW-5	2/9/88	VOCs & 15, B/N & 15, TPHC
Field Blank	2/9/88	VOCs & 15
Trip Blank	2/9/88	VOCs & 15
Soil:		
MW-C (MW-3)	1/14/88	VOCs & 15, B/N & 15, TPHC
SB-101	1/14/88	VOCs & 15, B/N & 15, TPHC
SB-102	1/14/88	VOCs & 15
Surface Water:		
D-1	2/25/88	VOCs & 15, B/N & 15, TPHC
M-2	2/25/88	VOCs & 15, B/N & 15, TPHC
U-3	2/25/88	VOCs & 15, B/N & 15, TPHC
Field Blank	2/25/88	VOCs & 15
Trip Blank	2/25/88	VOCs & 15, B/N & 15, TPHC
Ditch Sediment:		
SB-D1	2/25/88	VOCs & 15, B/N & 15, TPHC
SB-M2	2/25/88	VOCs & 15, B/N & 15, TPHC
SB-U3	2/25/88	VOCs & 15, B/N & 15, TPHC

NOTE:

VOCs - volatile organic compounds
 TPHC - total petroleum hydrocarbons

TABLE 4: WATER-LEVEL MEASUREMENTS

Well No.	Elevation of Measuring Pt. (ft amsl)	-----2-9-88-----		-----2-25-88-----		-----3-8-88-----		-----3-16-88-----	
		Depth to Water (ft bmp)	Water-Level Elevation (ft amsl)	Depth to Water (ft amsl)	Water-Level Elevation (ft amsl)	Depth to Water (ft amsl)	Water-Level Elevation (ft amsl)	Depth to Water (ft amsl)	Water-Level Elevation (ft amsl)
MW-1	102.13	1.75	100.38	3.86	98.27	4.10	98.03	4.24	97.89
MW-2	101.53	1.25	100.28	3.45	98.08	3.70	97.83	3.80	97.73
MW-3	101.99	1.90	100.09	3.82	98.17	4.08	97.91	4.19	97.80
MW-4	100.67	1.97	98.70	2.79	97.88	2.98	97.69	3.06	97.61
Staff Gauge	96.74*	NM	NM	NM	NM	1.58	98.32	1.59	98.33

NOTES:

bmp - below measuring point

amsl - assumed mean sea level

*elevation of 0.00

NM - not measured (staff gauge not installed)

TABLE 5: CONCENTRATIONS OF PRIORITY POLLUTANT ORGANIC COMPOUNDS
IN GROUND-WATER SAMPLES

Volatile Organic Compounds:	MW-1	MW-2	MW-3	MW-4	MW-5 Duplicate of MW-4	Field Blank	Lab Blank	Trip Blank
1,2-Dichloroethane		7.3						
1,1-Dichloroethane				2.1J	2.6J			
Trans-1,2-Dichloroethene		7.7	4.1J					
Methylene chloride						60.2	3.5J	
Toluene		2.0J	1.6J	1.5J	1.9J			1.7J
Vinyl chloride		<u>23</u>	<u>25</u>					
Xylenes		4.4J		12	10			

Total 44.4 30.7 15.6 14.5

Base/Neutral Extractables:

Lab

Naphthalene	0.8J	4.8J		6.3J	6.1J			
Acenaphthene		0.1J						
Fluorene		0.2J						
Phenanthrene		0.4J						
Dibutyl phthalate	1.4J	1.4J	1.4J					
Bis (2-ethylhexyl) phthalate	2.8J	2.0J	1.2J	1.2J	41.9		5.1J	
Di-n-octyl phthalate							3.4J	

Notes:

All concentrations in ug/l.

Blank space indicates none detected.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

TABLE 6: CONCENTRATIONS OF PRIORITY POLLUTANT ORGANIC COMPOUNDS
IN SOIL SAMPLES

210 61

	MW-3	SB-101 (1)	B-102* (1)	Field Blank	Trip Blank
Volatile Organic Compounds:					
Benzene	9.4J				
Methylene chloride	12JB				
Toluene	550				
1,1,1-Trichloroethane	22J				
Trichlorofluoromethane	11J				
Xylenes (total)	48				
	<u>652.4</u>				
Base/Neutral Extractables:					
Naphthalene	360	100J			
Acenaphthylene	80J	100J			
Acenaphthene	200J	30J			
Fluorene	330	70J			
Phenanthrene	1,800-	570			
Anthracene	360	100J			
Fluoranthene	1,900-	930			
Pyrene	1,700-	900			
Bis(2-ethylhexyl) phthalate	80J	200			
Chrysene	880	510			
Benzo(a)anthracene	820	410			
Benzo(b)fluoranthene	760	1000			
Benzo(a)pyrene	800	400			
Indeno(1,2,3-c,d)pyrene	470	340			
Benzo(ghi)perylene	430	330			
	<u>10,970</u>	<u>5,990</u>			
Total Petroleum Hydrocarbons:					
mg/kg	110	149			

NOTES:

*Laboratory-blind duplicate of SB-101.

All concentrations in ug/l unless otherwise noted.

Blank space indicates none detected.

(1) Detection limits were elevated due to high concentration of non-priority pollutant volatile organics in sample.

J Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

ATTACHMENT E25

TABLE 7: CONCENTRATIONS OF PRIORITY POLLUTANT ORGANIC COMPOUNDS
IN SURFACE WATER SAMPLES

Volatile Organic Compounds:

	D-1	M-2	U-3	Field Blank	Trip Blank
1,1-Dichloroethane	1.2J				
Trans-1,2-Dichloroethene	38	2.6J	3.0J		
Tetrachloroethene	1.3J				
Toluene	1.4J				
1,1,1-Trichloroethane	2.1J				
Trichloroethene	60.3	1.3J	1.7J		

Base/Neutral Extractables:

1,2,4-Trichlorobenzene	0.5J		
Acenaphthene	0.1J		
Phenanthrene	0.2J	0.1J	0.3J
Anthracene	0.4J		0.1J
Fluoranthene	0.2J	0.2J	0.6J
Pyrene	0.2J	0.2J	0.8J
Bis(2-ethylhexyl) phthalate			3.0J
Chrysene			0.5J
Benzo(a)anthracene			0.3J
Benzo(b)fluoranthene			0.2J
Benzo(a)pyrene			0.1J

Total Petroleum
Hydrocarbons (mg/l) 1.1

All concentrations in ug/l except for TPHC.

Blank space indicates none detected.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

TABLE 8: CONCENTRATIONS OF PRIORITY POLLUTANT ORGANIC COMPOUNDS
IN DITCH SEDIMENT SAMPLES

	SB-D1	SB-M2	SB-U3
Volatile Organic Compounds:			
Trans-1,2-Dichloroethene	31	67	50
Toluene		23J	
Methylene chloride	31		28
Trichloroethene	39	23J	75
Trichlorofluoromethane	37B	19JB	28B
	101	5	
Base/Neutral Extractables:			
1,4-Dichlorobenzene	700		
Naphthalene	2100	500J	200J
Acenaphthylene	300J	500J	
Acenaphthene	1500	400J	
Fluorene	3900	5100	
Phenanthrene	12000	19500	900
Anthracene	28900	17600	200J
Dibutyl phthalate	1000	100J	200J
Fluoranthene	12000	10900	1700
Pyrene	10000	8200	1600
Butyl benzyl phthalate		200J	300J
Bis(2-ethylhexyl) phthalate	800	1800	3000
Chrysene	5000	5800	1100
Benzo(a)anthracene	3300	3900	800
Di-n-octyl phthalate			200J
Benzo(b)fluoranthene	6000	6600	900
Benzo(a)pyrene	2300	3200	700
Indeno(1,2,3-c,d)pyrene	1000	1500	
Dibenzo(a,h)anthracene		500J	
Benzo(ghi)perylene	1000	1500	200J
	91,500	85,667	101,700
Total Petroleum Hydrocarbons (mg/kg)	797	262	263

All concentrations in ug/l, except for TPHC.
Blank space indicates none detected.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

GERAGHTY & MILLER, INC.

APPENDIX C

Well Inventory

ATTACHMENT E28

LATITUDE 404518
LONGITUDE 740841

DRAFT

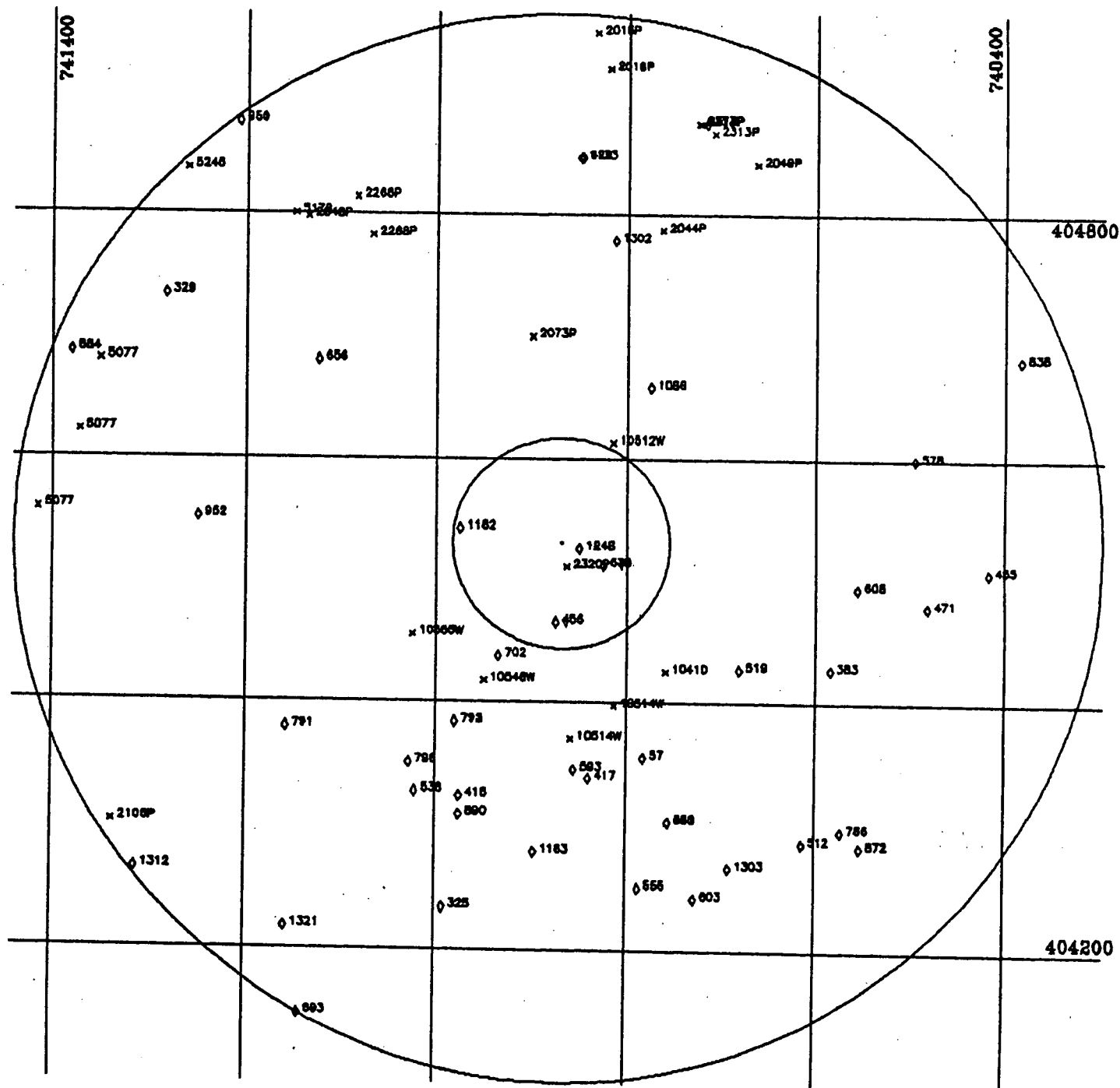
SCALE: 1 Mile

* WATER WITHDRAWAL POINTS
 O HUGO CASE INDEX SITES
 1 MILE AND 5 MILE RADII INDICATED

NU08 CASE INDEX DATA RETRIEVED FROM:
NEW JERSEY GEOLOGICAL SURVEY
ON 12/22/87

PLOT PRODUCED BY:
 NJDEP
 DIVISION OF WATER RESOURCES
 BUREAU OF WATER ALLOCATION
 CN-120
 TRENTON, NJ 08628
 DATE: 03/21/88

SUBJECT TO REVISION



SITENUM	NAME	LAT	LON	DISTANCE	CONTAM	FMCODE1	FMCODE2	STATUS1	STATUS2
884	U.S. RADIUM CORP, ORANGE, ESSEX CO.	404652	741348	4.8	67	0110	3070	1	E
1312	RUGER CHEMICAL, IRVINGTON, ESSEX CO.	404238	741308	5.0	00	0140	3070	1	C
329	GLEN RIDGE RADON SITE, ESSEX CO.	404720	741250	4.3	67	110	3070	1	F
952	ORANGE WATER DEPT., ORANGE, ESSEX CO.	404530	741230	3.3	00	0130	3070	1	C
950	LIVINGSTON WATER DEPT., LIVINGSTON, ESSEX CO.	404845	741205	5.0	0	3070	0	1	
951	MONTCLAIR WATER DEPT., MONTCLAIR, ESSEX CO.	404845	741205	5.0	0	0144	3070	1	
791	GENERAL ELECTRIC CO-NEWARK LAMP PLANT	404347	741135	3.1	00	0103	3070	1	B
1321	J.F.HENRY CHEMICAL CO., NEWARK, ESSEX CO.	404210	741135	4.4	63	0110	3070	1	B
693	J.T. BAKER, PHILLIPSBURG, WARREN CO.	404129	741126	5.0	00	130	0010	1	A
656	COOPER IND (FORM.MCGRAW EDISON), BELLEVILLE, ESSEX CO.	404649	741115	2.8	00	3070	130	1	C
796	J & R METALLIZING CO, INC., NEWARK, ESSEX CO.	404330	741017	2.5	00	0110	3070	1	B
538	J.L. ARMITAGE + CO., NEWARK, ESSEX CO.	404316	741013	2.7	0	130	3070	1	
325	FRONTAGE ROAD DRUM DUMP, NEWARK, ESSEX CO.	404220	740955	3.6	1	0130	0	1	S
792	GEORGIA-PACIFIC CORP--CASTING OPER, NEWARK, ESSEX CO.	404350	740948	1.9	00	0110	3070	1	B
793	GEORGIA-PACIFIC CORP--POLYMER MATE, NEWARK, ESSEX CO.	404350	740948	1.9	00	0110	3070	1	B
416	ALBERT STEEL DRUM/ PRENTISS DRUG, NEWARK, ESSEX CO. (DIOXIN)	404314	740945	2.5	72	103	130	1	E
890	CHEM-FLEUR, NEWARK, ESSEX CO.	404305	740945	2.7	00	0110		1	B
1182	FRANKLIN PLASTICS, KEARNY, HUDSON CO.	404525	740945	0.9	34	0100	3070	1	B
702	HARRISON COAL GAS SITE, HUDSON CO.	404422	740921	1.2	70	0110	3070	1	C
1163	OAK ISLAND-CONRAIL TERMINAL, NEWARK, ESSEX CO.	404247	740858	2.9	52			3	
456	CONRAIL+MEADOWS YARD, KEARNY, HUDSON CO.	404439	740845	0.7	52	101	130	1	
593	FEDERATED METALS, NEWARK, ESSEX CO.	404327	740833	2.1	0	130	3070	9	
1133	HARBOT TOLL AND OIL, NUTLEY, ESSEX CO.	404828	740830	3.6	53			3	
1248	GUIGNON & GREEN, KEARNY, HUDSON CO.	404515	740830	0.2	53	0130	0101	1	C
429	SEL REX, NUTLEY, ESSEX CO.	404828	740829	3.6	00	0130	3070	1	
417	TROY CHEM., NEWARK, ESSEX CO.	404323	740824	2.2	38	130	3070	1	
635	80-LISTER AVENUE, NEWARK, (DIOXIN CASE), ESSEX CO.	404507	740815	0.4	72	103	0130	1	G
676	120 LISTER AVE (DIOXIN), NEWARK, ESSEX CO.	404507	740815	0.4	72	0103	0130	1	G
1302	RESEARCH ORGANIC/INORGANIC CHEM CORP,BELLEVILLE, ESSEX CO.	404747	740808	2.9	00	0130	3070	1	E
555	CENTRAL STEEL DRUM, NEWARK, ESSEX CO.	404230	740752	3.3	1	130	3070	0	
57	ASHLAND CHEM., NEWARK, ESSEX CO.	404333	740749	2.1	53	130	3070	1	
1086	G M Z CONCRETE, NORTH ARLINGTON, BERGEN CO.	404635	740745	1.7	53	0103	0	1	B
410	INLAND CHEM., NEWARK, ESSEX CO.	404302	740733	2.8	00	3070	0	9	
551	SUNMARK IND., NEWARK, ESSEX CO.	404302	740733	2.8	63	130	3070	9	
603	TEXACO TERMINAL, NEWARK, ESSEX CO.	404225	740716	3.5	53	130	3070	9	
174	PENICK CORP., LYNHURST, BERGEN CO.	404845	740710	4.2	12	0110	3070	2	J
1303	DROYERS POINT, JERSEY CITY, HUDSON CO.	404240	740654	3.4	39	0101	0130	1	A
519	SYNCON RESINS, KEARNY, HUDSON CO.	404416	740648	2.0	00	100	3070	1	G
512	ROOSEVELT DRIVE-IN (DAYLIN/GRACE), JERSEY CITY, HUDSON CO.	404252	740608	3.6	39	103	101	5	B
383	PSEG, KEARNY, HUDSON CO.	404416	740550	2.8	38	130	3070	0	
786	ENGLER INSTRUMENTS, JERSEY CITY, HUDSON CO.	404258	740543	3.7	35	0103	3050	1	B
608	STANDARD CHLORINE, KEARNY, HUDSON CO.	404456	740533	2.8	39	103	101	0	
872	TEXTILE PROOFERS, JERSEY CITY, HUDSON CO.	404250	740531	4.0	63	0103	3050	1	B
578	CONRAIL SECAUCUS, HUDSON CO.	404600	740457	3.4	1	103	102	1	
471	KOPPERS, KEARNY, HUDSON CO.	404447	740449	3.4	1	103	130	9	
455	DIAMOND SHAMROCK, S. KEARNY, HUDSON CO.	404504	740410	4.0	35	103	101	1	
838	SQUARE D CO, SECAUCUS, BERGEN CO.	404649	740350	4.6	00	0110	3070	1	B

Number of Observations: 47

ATTACHMENT E30

SITENUM	NAME	LAT	LON	DISTANCE	CONTA	FMCODE1	FMCODE2	STATUS1	STATUS2
57	ASHLAND CHEM., NEWARK, ESSEX CO.	404333	740749	2.1	53	130	3070	1	
174	PENICK CORP., LYNDHURST, BERGEN CO.	404845	740710	4.2	12	0110	3070	2	J
325	FRONTAGE ROAD DRUM DUMP, NEWARK, ESSEX CO.	404220	740955	3.6	1	0130	0	1	B
329	GLEN RIDGE RADON SITE, ESSEX CO.	404720	741250	4.3	67	110	3070	1	F
383	PSE&G, KEARNY, HUDSON CO.	404416	740550	2.8	38	130	3070	0	
410	INLAND CHEM., NEWARK, ESSEX CO.	404302	740733	2.8	00	3070	0	9	
416	ALBERT STEEL DRUM/ PRENTISS DRUG, NEWARK, ESSEX CO. (DIOXIN)	404314	740945	2.5	72	103	130	1	E
417	TROY CHEM., NEWARK, ESSEX CO.	404323	740824	2.2	38	130	3070	1	
429	SEL REX, NUTLEY, ESSEX CO.	404828	740829	3.6	00	0130	3070	1	
455	DIAMOND SHAHROCK, S. KEARNY, HUDSON CO.	404504	740410	4.0	35	103	101	1	
456	CONRAIL MEADOWS YARD, KEARNY, HUDSON CO.	404439	740845	0.7	52	101	130	1	
471	KOPPERS, KEARNY, HUDSON CO.	404447	740449	3.4	1	103	130	9	
512	ROOSEVELT DRIVE-IN (DAYLIN/GRACE), JERSEY CITY, HUDSON CO.	404252	740608	3.6	39	103	101	5	B
519	SYNCON RESINS, KEARNY, HUDSON CO.	404416	740648	2.0	00	100	3070	1	6
538	J.L. ARMITAGE + CO., NEWARK, ESSEX CO.	404316	741013	2.7	0	130	3070	1	
551	SUNMARK IND., NEWARK, ESSEX CO.	404302	740733	2.8	63	130	3070	9	
555	CENTRAL STEEL DRUM, NEWARK, ESSEX CO.	404230	740752	3.3	1	130	3070	0	
578	CONRAIL SECAUCUS, HUDSON CO.	404600	740457	3.4	1	103	102	1	
593	FEDERATED METALS, NEWARK, ESSEX CO.	404327	740833	2.1	0	130	3070	9	
603	TEXACO TERMINAL, NEWARK, ESSEX CO.	404225	740716	3.5	53	130	3070	9	
608	STANDARD CHLORINE, KEARNY, HUDSON CO.	404456	740533	2.8	39	103	101	0	
635	80-LISTER AVENUE, NEWARK, (DIOXIN CASE), ESSEX CO.	404507	740815	0.4	72	103	0130	1	6
656	COOPER IND (FORM.MCGRAW EDISON), BELLEVILLE, ESSEX CO.	404648	741115	2.8	00	3070	130	1	C
676	120 LISTER AVE (DIOXIN), NEWARK, ESSEX CO.	404507	740815	0.4	72	0103	0130	1	6
693	J.T. BAKER, PHILLIPSBURG, WARREN CO.	404129	741126	5.0	00	130	8010	1	A
702	HARRISON COAL GAS SITE, HUDSON CO.	404422	740921	1.2	70	0110	3070	1	C
786	ENGLER INSTRUMENTS, JERSEY CITY, HUDSON CO.	404258	740543	3.7	35	0103	3050	1	B
791	GENERAL ELECTRIC CO-NEWARK LAMP PLANT	404347	741135	3.1	00	0103	3070	1	B
792	GEORGIA-PACIFIC CORP--CASTING OPER, NEWARK, ESSEX CO.	404350	740948	1.9	00	0110	3070	1	B
793	GEORGIA-PACIFIC CORP--POLYMER MATE, NEWARK, ESSEX CO.	404350	740948	1.9	00	0110	3070	1	B
796	J & R METALLIZING CO, INC., NEWARK, ESSEX CO.	404330	741017	2.5	00	0110	3070	1	B
838	SQUARE D CO, SECAUCUS, BERGEN CO.	404649	740350	4.6	00	0110	3070	1	B
872	TEXTILE PROOFERS, JERSEY CITY, HUDSON CO.	404250	740531	4.0	63	0103	3050	1	B
884	U.S. RADIUM CORP, ORANGE, ESSEX CO.	404652	741348	4.8	67	0110	3070	1	E
890	CHEM-FLEUR, NEWARK, ESSEX CO.	404305	740945	2.7	00	0110		1	B
950	LIVINGSTON WATER DEPT., LIVINGSTON, ESSEX CO.	404845	741205	5.0	0	3070	0	1	
951	MONTCLAIR WATER DEPT., MONTCLAIR, ESSEX CO.	404845	741205	5.0	0	0144	3070	1	
952	ORANGE WATER DEPT., ORANGE, ESSEX CO.	404530	741230	3.3	00	0130	3070	1	C
1086	G M Z CONCRETE, NORTH ARLINGTON, BERGEN CO.	404635	740745	1.7	53	0103	0	1	B
1133	HARBOT TOLL AND OIL, NUTLEY, ESSEX CO.	404828	740830	3.6	53			3	
1163	OAK ISLAND-CONRAIL TERMINAL, NEWARK, ESSEX CO.	404247	740858	2.9	52			3	
✓ 1182	FRANKLIN PLASTICS, KEARNY, HUDSON CO.	404525	740945	0.9	34	0100	3070	1	B
1248	GUIGNON & GREEN, KEARNY, HUDSON CO.	404515	740830	0.2	53	0130	0101	1	C
1302	RESEARCH ORGANIC/INORGANIC CHEM CORP, BELLEVILLE, ESSEX CO.	404747	740808	2.9	00	0130	3070	1	E
1303	DROYERS POINT, JERSEY CITY, HUDSON CO.	404240	740654	3.4	39	0101	0130	1	A
1312	RUGER CHEMICAL, IRVINGTON, ESSEX CO.	404238	741308	5.0	00	0140	3070	1	C
1321	J.F.HENRY CHEMICAL CO., NEWARK, ESSEX CO.	404210	741135	4.4	63	0110	3070	1	B

Number of Observations: 47

ATTACHMENT E31

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GE01	GE02	CAPACITY
1041D	AMERICAN REF-FUEL COMPANY	175 WELL	POINTS	404415	740735	F	1.5	13	14	35	GOSD		250
10512W	V.H. SWENSON CO., INC.	2602717	1	404408	740809	F	1.1	17	07	400	GTRB		150
10514W	RONSON METALS CORP.	2603408	1	404358	740808	T	1.6	13	14	300	GTRB		150
	RONSON METALS CORP.	2604993	3	404342	740835	T	1.8	13	14	165			100
10546W	PUBLIC SERVICE ELECTRIC & GAS	4600103	1	404410	740930	F	1.5	17	04	216	GTRB		250
10555W	NEW JERSEY BELL TELEPHONE	2603173	1	404433	741015		1.6	13	14	215	GTRB		80
2016P	ITT AVIONICS DIVISION	2601834	1	404930	740820	T	4.8	13	16	500	GTRB		150
	ITT AVIONICS DIVISION	2601835	2	404930	740820		4.8	13	16	450	GTRB		150
	ITT AVIONICS DIVISION	2601905	3	404930	740820		4.8	13	16	500	GTRB		150
	ITT AVIONICS DIVISION	2604692	4/SEALED	404912	740812		4.5	13	16	500	GTRB		200
2044P	GRAND UNION CO.	4600002		404752	740738	S	3.1	03	39	300	GTRB		80
2048P	NATIONAL STARCH & CHEMICAL	2604314	1	404758	741122	T	3.9	13	02	410	GTRB		200
2049P	SIKA CORPORATION	2604036	1	404825	740638		4.0	03	32	302	GTRB		220
2073P	INTERNATIONAL MINERALS & CHEM.	4600092	1	404700	740900	T	2.0	13	01	352	GTRB		100
	INTERNATIONAL MINERALS & CHEM.	4600093	2	404700	740900	T	2.0	13	01	400	GTRB		150
	INTERNATIONAL MINERALS & CHEM.	2605113	3	404700	740900	T	2.0	13	01	400	GTRB		150
2106P	JERSEY PLASTIC MOLDERS, INC.	2604728	2	404301	741322		4.9	13	09	330	GTRB		185
2268P	FOREST HILL FIELD CLUB	2604258	1	404749	741041	S	3.4	13	02	238	GTRB		60
	FOREST HILL FIELD CLUB	POND		404808	741051	F	3.8	13	02	14	SP		1200
2313P	PENCO OF LYNHURST INC.	4600172	1	404845	740714		4.2	03	32	267	GTRB		110
	PENCO OF LYNHURST INC.	4600173	2	404845	740715		4.2	03	32	313	GTRB		185
	PENCO OF LYNHURST INC.	2601699	3	404845	740715	F	4.2	03	32	410	GTRB		150
	PENCO OF LYNHURST INC.	2603804	4	404840	740705	F	4.1	03	32	352	GTRB		185
2320P	HONEYCOMB PLASTICS CORP.	4600182	1	404506	740838	S	0.2	17	07	500	GTRB		210
	HONEYCOMB PLASTICS CORP.	2602384	2	404506	740838	S	0.2	17	07	700	GTRB		500
5077	ORANGE CITY	2603440	7	404534	741409	S	4.8	13	17	551	GTRB		350
	ORANGE CITY	2604322	8	404648	741330	S	4.6	13	17	500	GTRB		600
	ORANGE CITY	2614444	9	404613	741343	F	4.5	13	17	506	GTRB		500
5179	BLOOMFIELD TOWN	2604763	1	404800	741130	T	4.0	13	02	300	GTRB		330
5245	MONTCLAIR TOWN	2603687	RAND W. #1	404822	741237	S	4.9	13	13	300	GTRB		400

Number of Observations: 30

NUMBER	NAME	SOURCEID	LOCID	LAT	LONG	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GE01	GE02	CAPACITY
5077	ORANGE CITY	2603440	7	404534	741409	S	4.8	13	17	551	GTRB		350
5077	ORANGE CITY	2614444	9	404613	741343	F	4.5	13	17	506	GTRB		500
5077	ORANGE CITY	2604322	8	404648	741330	S	4.6	13	17	500	GTRB		600
2106P	JERSEY PLASTIC MOLDERS, INC.	2604728	2	404301	741322		4.9	13	09	330	GTRB		185
5245	MONTCLAIR TOWN	2603687	RAND W. #1	404822	741237	S	4.9	13	13	300	GTRB		400
5179	BLOOMFIELD TOWN	2604763	1	404900	741130	T	4.0	13	02	300	GTRB		330
2048P	NATIONAL STARCH & CHEMICAL	2604314	1	404758	741122	T	3.9	13	02	410	GTRB		200
2268P	FOREST HILL FIELD CLUB	POND		404808	741051	F	3.8	13	02	14	SP		1200
2268P	FOREST HILL FIELD CLUB	2604258	1	404749	741041	S	3.4	13	02	238	GTRB		60
1055SW	NEW JERSEY BELL TELEPHONE	2603173	1	404433	741015		1.6	13	14	215	GTRB		80
10546W	PUBLIC SERVICE ELECTRIC & GAS	4600103	1	404410	740930	F	1.5	17	04	216	GTRB		250
2073P	INTERNATIONAL MINERALS & CHEM.	4600092	1	404700	740900	T	2.0	13	01	352	GTRB		100
2073P	INTERNATIONAL MINERALS & CHEM.	4600093	2	404700	740900	T	2.0	13	01	400	GTRB		150
2073P	INTERNATIONAL MINERALS & CHEM.	2605113	3	404700	740900	T	2.0	13	01	400	GTRB		150
2320P	HONEYCOMB PLASTICS CORP.	4600182	1	404506	740838	S	0.2	17	07	500	GTRB		210
2320P	HONEYCOMB PLASTICS CORP.	2602384	2	404506	740838	S	0.2	17	07	700	GTRB		500
10514W	RONSON METALS CORP.	2604993	3	404342	740835	T	1.8	13	14	165			100
2016P	ITT AVIONICS DIVISION	2601834	1	404930	740820	T	4.8	13	16	500	GTRB		150
2016P	ITT AVIONICS DIVISION	2601835	2	404930	740820		4.8	13	16	450	GTRB		150
2016P	ITT AVIONICS DIVISION	2601905	3	404930	740820		4.8	13	16	500	GTRB		150
2016P	ITT AVIONICS DIVISION	2604692	4/SEALED	404912	740812		4.5	13	16	500	GTRB		200
10512W	V.H. SWENSON CO., INC.	2602717	1	404608	740809	F	1.1	17	07	400	GTRB		150
10514W	RONSON METALS CORP.	2603408	1	404358	740808	T	1.6	13	14	300	GTRB		150
2044P	GRAND UNION CO.	4600002		404752	740738	S	3.1	03	39	300	GTRB		80
1041D	AMERICAN REF-FUEL COMPANY	175 WELL	POINTS	404415	740735	F	1.5	13	14	35	GO5D		250
2313P	PENCO OF LYNDBURST INC.	4600173	2	404845	740715		4.2	03	32	313	GTRB		185
2313P	PENCO OF LYNDBURST INC.	2601699	3	404845	740715	F	4.2	03	32	410	GTRB		150
2313P	PENCO OF LYNDBURST INC.	4600172	1	404845	740714		4.2	03	32	267	GTRB		110
2313P	PENCO OF LYNDBURST INC.	2603804	4	404840	740705	F	4.1	03	32	352	GTRB		185
2049P	SIKA CORPORATION	2604036	1	404825	740638		4.0	03	32	302	GTRB		220

Number of Observations: 30

RESULTS OF THE ECRA SITE INVESTIGATION
AT THE GUIGNON & GREEN FACILITY,
KEARNY, NEW JERSEY

Envirotech Research, Inc. Laboratory Report

APPENDIX D

(Volume D-1) Ground-Water Sample Analyses

ATTACHMENT E3A

ENVIROTECH RESEARCH, INC.

1095 Amboy Avenue • Edison • New Jersey 08837
(201) 225-2225

April 4, 1988

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601

Attention: Ms. Camille Mancuso

Dear Ms. Mancuso:

Enclosed are the results you requested for the following
samples taken 02/25/88:

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
15450	Trip Blank	VOA +15
15451	Field Blank	VOA +15, BN +15 & PHC
15452	1D	VOA +15, BN +15 & PHC
15453	M2	VOA +15, BN +15 & PHC
15454	U3	VOA +15, BN +15 & PHC
15455	SB-1D	VOA +15, BN +15 & PHC
15456	SB-M2	VOA +15, BN +15 & PHC
15457	SB-U3	VOA +15, BN +15 & PHC

An invoice for our services is also enclosed. Please call
me at 225-2225 if you have any questions.

Very truly yours,



Michael J. Urban
Laboratory Manager

ATTACHMENT E35

ENVIROTECH RESEARCH

1095 Amboy Avenue, Edison, New Jersey 08837
(201) 225-2225

February 26, 1988

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601

Attention: Ms. Camille Mancuso

Dear Ms. Mancuso:

Enclosed are the results you requested for the following samples taken 02/09/88:

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
15191	MW-1	VOA +15, BN +15 & PHC
15192	MW-2	VOA +15, BN +15 & PHC
15193	MW-3	VOA +15, BN +15 & PHC
15194	MW-4	VOA +15, BN +15 & PHC
15195	MW-5	VOA +15, BN +15 & PHC
15196	Field Blank	VOA +15
15197	Trip Blank	VOA +15

An invoice for our services is also enclosed. Please call me at 225-2225 if you have any questions.

Very truly yours,



Michael J. Urban
Laboratory Manager

ATTACHMENT E36

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DATA REPORTING QUALIFIERS

ND - The compound was not detected at the indicated concentration.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1099A

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 15191	
	Client ID: MW-1	Detection Limit
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	ND	5.0

Geraghty & Miller
 7 Atlantic Street
 Hackensack, NJ 07601
 Attention: Ms. Camille Mancuso

Report Date: 2/26/88
 Job No.: 3884
 N.J. Certified Lab No. 12543
 QA Batch 1058

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 15191 Client ID: MW-1 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	0.8J	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	ND	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 15191	<u>Detection Limit</u>
	Client ID: MW-1	
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutyl phthalate	1.4J	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	2.8J	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1099A

VOLATILE ORGANICS

	Lab No. 15192	
	Client ID: MW-2	Detection Limit
<u>Parameter</u>	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	7.3 ✓	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	7.7 ✓	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	2.0J ✓	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	23	10
Xylenes (Total)	4.4J	5.0

ATTACHMENT E42

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7 Atlantic Street
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Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 15192	Detection Limit
	Client ID: MW-2 <u>Units: ug/l</u>	<u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	4.8J	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	0.1J	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	0.2J	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

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Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 15192 Client ID: MW-2 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	0.4J	10
Anthracene	ND	10
Dibutyl phthalate	1.4J	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	2.0J	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

ENVIROTECH RESEARCH

Geraghty & Miller
7 Atlantic Street
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Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1099B

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 15193	Detection Limit
	Client ID: MW-3	
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	4.1J ✓	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	1.6J ✓	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	25 ✓	10
Xylenes (Total)	ND	5.0

ATTACHMENT E45

Geraghty & Miller
7 Atlantic Street
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Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 15193	Detection Limit
	Client ID: MW-3	
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	ND	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	ND	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

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Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 15193	<u>Detection Limit</u>
	<u>Client ID: MW-3</u>	
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutyl phthalate	1.4J	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	1.2J	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

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Report Date: 2/26/88
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N.J. Certified Lab No. 12543
QA Batch 1099A

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19194	Detection Limit
	Client ID: MW-4 <u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	2.1J ✓	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	1.5J ✓	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	12 ✓	5.0

Geraghty & Miller
7 Atlantic Street
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Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 19194	Detection Limit
	Client ID: MW-4 <u>Units: ug/l</u>	<u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	6.3J	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	ND	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

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7 Atlantic Street
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Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 19194	Detection Limit
	Client ID: MW-4 Units: ug/l	Units: ug/l
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	1.2J	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

Geraghty & Miller
7 Atlantic Street
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Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1099A

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19195		Detection Limit
	Client ID: MW-5		
	<u>Units: ug/l</u>		<u>Units: ug/l</u>
Benzene	ND		5.0
Bromodichloromethane	ND		5.0
Bromoform	ND		5.0
Bromomethane	ND		10
Carbon tetrachloride	ND		5.0
Chlorobenzene	ND		5.0
Chloroethane	ND		10
2-Chloroethylvinyl ether	ND		10
Chloroform	ND		5.0
Chloromethane	ND		10
Dibromochloromethane	ND		5.0
1,1-Dichloroethane	2.6J		5.0
1,2-Dichloroethane	ND		5.0
1,1-Dichloroethene	ND		5.0
trans-1,2-Dichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0
cis-1,3-Dichloropropene	ND		5.0
trans-1,3-Dichloropropene	ND		5.0
Ethyl benzene	ND		5.0
Methylene chloride	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0
Tetrachloroethene	ND		5.0
Toluene	1.9J		5.0
1,1,1-Trichloroethane	ND		5.0
1,1,2-Trichloroethane	ND		5.0
Trichloroethene	ND		5.0
Trichlorofluoromethane	ND		5.0
Vinyl chloride	ND		10
Xylenes (Total)	10		5.0

Geraghty & Miller
7 Atlantic Street
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Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 19195	Detection Limit
	Client ID: MW-5 <u>Units: ug/l</u>	<u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	6.1J	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	ND	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

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Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1058

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 19195	Detection Limit
	Client ID: MW-5 <u>Units: ug/l</u>	<u>Units: ug/l</u>
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	41.9	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

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Report Date: 2/26/88
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QA Batch 1108

PETROLEUM HYDROCARBONS

<u>Envirotech Sample #</u>	<u>Client ID</u>	<u>Petroleum Hydrocarbons Units: mg/l</u>
15191	MW-1	ND
15192	MW-2	ND
15193	MW-3	ND
15194	MW-4	ND
15195	MW-5	ND

Detection Limit for Petroleum Hydrocarbons is 1.0 mg/l.

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7 Atlantic Street
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Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
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QA Batch 1099B

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 15196	
	Client ID: Field Blank	Detection Limit
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	60.2	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	ND	5.0

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Ms. Camille Mancuso

Report Date: 2/26/88
Job No.: 3884
N.J. Certified Lab No. 12543
QA Batch 1099B

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 15197	
	Client ID: Trip Blank	Detection Limit
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	1.7J	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	ND	5.0

ATTACHMENT F



November 3, 1988

Mr. Blaine Fresco
Industrial Site Evaluation Element
New Jersey Department of Environmental Protection
CN 028
Trenton, New Jersey 08625

Nov 7 2 28 PM '88
BUREAU OF SITE
EVALUATION

Re: Guignon & Green, ECRA Case No. 86-034.
Kearny, New Jersey

Dear Mr. Fresco:

As requested by the New Jersey Department of Environmental Protection (NJDEP), a second round of ground-water samples was collected from the four monitoring wells at Guignon & Green in August 1988 for chemical analysis. This letter summarizes the methodology and results of this sampling event.

GROUND-WATER SAMPLING

The four on-site monitoring wells were sampled on August 18, 1988 by Geraghty & Miller, Inc. hydrogeologists in accordance with the protocols outlined in the April 1987 workplan and the NJDEP's letter of August 1987. A laboratory-blind replicate was collected from monitoring well MW-4 and labelled MW-5. A field blank was also collected, and a laboratory-prepared trip blank accompanied the sample bottles. The samples were analyzed by Envirotech Research, Inc. of Edison, New Jersey for the parameters listed in Table 1.

ANALYTICAL RESULTS

Volatile Organic Compounds:

Total priority pollutant volatile organic compounds (VOCs) found in samples from MW-2 and MW-3 were approximately 64.8 and 60.6 micrograms per liter (ug/L), respectively (Table 2). No priority pollutant VOCs were found in the sample from MW-1. A total VOC concentration of 3.9 ug/L was found in one sample from MW-4, but no VOCs were found in the duplicate sample collected from this well. The results of the previous sampling (February 1988) are presented in Table 3 for comparison. The principal VOC detected in both sampling events was vinyl chloride.

ATTACHMENT FI

Base/Neutral Extractable Organic Compounds:

Priority pollutant base/neutral extractable organic compounds (B/N) were found in a total concentration of 120 ug/L in the sample of MW-2. The largest component of this total was 111 ug/L of naphthalene. Priority pollutant B/N compounds were detected in one other sample, from MW-4 at a total concentration of approximately 1.7 ug/L.

In the previous round of sampling and analysis, 0.8 ug/L naphthalene was detected in the sample from upgradient monitoring well, MW-1 (Table 3). Naphthalene was also found in samples from MW-2 (4.8 ug/L), MW-4 (6.3 ug/L) and its duplicate (6.1 ug/L). These concentrations are all below detection limits and are therefore approximate.

Petroleum Hydrocarbons:

Petroleum hydrocarbons were found in a total concentration of 4.0 milligrams per liter (mg/l) in the ground-water sample from MW-2 (Table 2). No petroleum hydrocarbons were detected in the samples from the other monitoring wells. In analysis of the previous round of ground-water samples, no petroleum hydrocarbons were detected in any of the samples (Table 3).

DISCUSSION

The ground-water quality data summarized in Table 2 indicate that only three contaminants found in concentrations above Bureau of Industrial Site Evaluation clean-up guidelines: (1) vinyl chloride, (2) naphthalene, and (3) petroleum hydrocarbons. These concentrations were not deemed to be of concern, and it is felt that remediation is not warranted. Furthermore, it is possible that these compounds detected in ground water could have an offsite origin.

There are numerous sites of fuel storage and in the areas upgradient vicinity of the Guignon & Green site. For example, located on the north side of Bergen Avenue are a major trucking operation and the Town of Kearny's Department of Public Works. Both sites house diesel powered vehicles, and fuel pumps are located at the Department of Public Works. In addition, an auto body repair operation is located on Schulyer Avenue near Bergen Avenue. West of the Guignon & Green site is another trucking company and a factory.

In addition, the drainage ditch and surface-water ponds adjacent to the site have periodically overflowed and flooded much of the Guignon & Green facility. Several industries and water disposal sites adjacent to these surface-water bodies may have contaminants which could have been deposited on the Guignon & Green facility. The relatively low concentrations of priority pollutant compounds detected in on-site ground-water samples and the number of


GERAGHTY & MILLER, INC.

potential off-site sources of contamination indicate that the Guignon & Green facility has not had a significant impact on ground-water quality.

We hope that this letter addresses NJDEP's concerns, and that this case may be brought to a close. We would be glad to coordinate a site visit if you desire to inspect the site, and answer any additional questions you may have.

Sincerely,

Camille Mancuso
Camille I. Mancuso
Scientist



Daniel A. Nachman
Associate

CAM:eav
#NJ1079KN2/110388.

Attachments
cc: Frank A. Darabi, P.E.
W. Robinson Frazier, Esq.

TABLE 3

TABLE 5: CONCENTRATIONS OF PRIORITY POLLUTANT ORGANIC COMPOUNDS
IN GROUND-WATER SAMPLES

Volatile Organic Compounds:	MW-1	MW-2	MW-3	MW-4	MW-5 Duplicate of MW-4	Field Blank	Lab Blank	Trip Blank
1,2-Dichloroethane		7.3						
1,1-Dichloroethane				2.1J	2.6J			
Trans-1,2-Dichloroethene		7.7	4.1J					
Methylene chloride						60.2	3.5J	
Toluene		2.0J	1.6J	1.5J	1.9J			1.7J
Vinyl chloride	* 23	* 25						
Xylenes		4.4J		12	10			

Base/Neutral Extractables:

						Lab
Naphthalene	0.8J	4.8J		6.3J	6.1J	
Acenaphthene		0.1J				
Fluorene		0.2J				
Phenanthrene		0.4J				
Dibutyl phthalate	1.4J	1.4J	1.4J			
Bis (2-ethylhexyl) phthalate	2.8J	2.0J	1.2J	1.2J	41.9	5.1J
Di-n-octyl phthalate						3.4J

Notes:

All concentrations in ug/l.

Blank space indicates none detected.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

Table 2: CONCENTRATIONS OF PRIORITY POLLUTANT ORGANIC COMPOUNDS
IN GROUND-WATER SAMPLES

Volatile Organic Compounds:		MW-1	MW-2	MW-3	MW-4	MW-5 Duplicate of MW-4	Field Blank	Trip Blank	Lab Blank
Benzene			1.1J						
1,1-Dichloroethane			2.1J						
Trans-1,2-Dichloroethene			6.8	4.6J					
Ethyl benzene			4.5J						
Toluene			9.3						
Vinyl chloride		* 23		* 56			1.2J		
Xylenes			18			3.9J			

Base/Neutral Extractables:

Naphthalene	111	1.7J
Acenaphthene	0.1J	
Fluorene	1.3J	
Phenanthrene	2.9J	
Fluorathene	1.8J	
Pyrene	1.7J	
Benzo(b)Fluorathene	0.8J	
Benzo(a)pyrene	0.4J	

Petroleum Hydrocarbons: 4.0
units: mg/l

Notes:

All concentrations in ug/l.

Blank space indicates none detected.

J- Mass spectral data indicates the presence of a compound that meets identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

TABLE 1. ANALYTICAL PARAMETERS FOR GROUND-WATER SAMPLES
COLLECTED AUGUST 18, 1988

Sample Number	Parameters
MW-1	VOCs & 15, B/N & 15, TPHC
MW-2	VOCs & 15, B/N & 15, TPHC
MW-3	VOCs & 15, B/N & 15, TPHC
MW-4	VOCs & 15, B/N & 15, TPHC
MW-5*	VOCs & 15, B/N & 15, TPHC
Field Blank	VOCs & 15
Trip Blank	VOCs & 15.

ENVIROTECH RESEARCH, INC.

777 New Durham Road
Edison, New Jersey 08817
(201) 549-3900

September 13, 1988

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601

Attention: Mr. William J. Seramba

Re: Job No. 4391

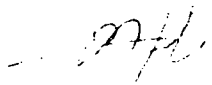
Dear Sir:

Enclosed are the results you requested for the following samples taken 08/18/88 at Kearny:

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
19328	MW-1	VOA +15, BN +15 & PHC
19329	MW-2	VOA +15, BN +15 & PHC
19330	MW-3	VOA +15, BN +15 & PHC
19331	MW-4	VOA +15, BN +15 & PHC
19332	MW-5	VOA +15
19333	Trip Blank	VOA +15
19334	Field Blank	VOA +15

An invoice for our services is also enclosed. Please call me at 549-3900 if you have any questions.

Very truly yours,


Michael J. Urban
Laboratory Manager

ATTACHMENT F7

TABLE OF CONTENTS

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QA Summary Tables	3
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GC/MS - Raw Data	6
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7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1175

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19328	<u>Detection Limit</u>
	Client ID: MW-1	
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	ND	5.0

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7 Atlantic Street
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Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 19328 Client ID: MW-1 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	ND	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	ND	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

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Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 19328 Client ID: MW-1 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	ND	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

ATTACHMENT F11

ENVIROTECH RESEARCH, INC.

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7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1175

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19329 Client ID: MW-2 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
Benzene	1.1J	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	2.1J	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	6.8	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	4.5J	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	9.3	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	23	10
Xylenes (Total)	18	5.0

ATTACHMENT Fl2

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7 Atlantic Street
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Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 19329	<u>Detection Limit</u>
	Client ID: MW-2	
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	111	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	0.1J	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	1.3J	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

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Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 19329 Client ID: MW-2 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	2.9J	10
Anthracene	ND	10
Dibutyl phthalate	ND	10
Fluoranthene	1.8J	10
Pyrene	1.7J	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	ND	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	0.8J	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	0.4J	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

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Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1175B

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19330	Detection Limit
	Client ID: MW-3 <u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	4.65	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	56	10
Xylenes (Total)	ND	5.0

ENVIROTECH RESEARCH, INC.

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Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 19330	Detection Limit
	Client ID: MW-3 <u>Units: ug/l</u>	<u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	ND	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	ND	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

ENVIROTECH RESEARCH, INC.

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7 Atlantic Street
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Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 19330 Client ID: MW-3 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	ND	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

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7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1175

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19331	Detection Limit
	Client ID: MW-4 <u>Units: ug/l</u>	
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	ND	5.0

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 19331 Client ID: MW-4 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	1.7J	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	ND	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

ENVIROTECH RESEARCH, INC.

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7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 19331 Client ID: MW-4 <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	ND	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

ENVIROTECH RESEARCH, INC.

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Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1227

PETROLEUM HYDROCARBONS

<u>Envirotech Sample #</u>	<u>Client ID</u>	<u>Petroleum Hydrocarbons Units: mg/l</u>
19328	MW-1	ND
19329	MW-2	4.0
19330	MW-3	ND
19331	MW-4	ND

Detection Limit for Petroleum Hydrocarbons is 1.0 mg/l.

ATTACHMENT F21

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1175

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19332	<u>Detection Limit</u> Units: ug/l
	Client ID: MW-5 Units: ug/l	
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	3.9J	5.0

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1175

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19333 Client ID: Trip Blank <u>Units: ug/l</u>	Detection Limit <u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	ND	5.0

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1175

VOLATILE ORGANICS

<u>Parameter</u>	Lab No. 19334	
	Client ID: Field Blank	Detection Limit
	<u>Units: ug/l</u>	<u>Units: ug/l</u>
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	1.2J	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	ND	5.0

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch No. 1175

QA SUMMARY - DUPLICATE and BLANK

VOLATILE ORGANICS - WATER

<u>Parameter</u>	Sample Lab No. 19334SPK <u>Units: ug/l</u>	Duplicate Lab No. 19334SPK <u>Units: ug/l</u>	8/29/88 Lab Blank <u>Units: ug/l</u>
Benzene	37.0	38.0	ND
Bromodichloromethane	ND	ND	ND
Bromoform	ND	ND	ND
Bromomethane	ND	ND	ND
Carbon tetrachloride	ND	ND	ND
Chlorobenzene	49.0	47.0	ND
Chloroethane	ND	ND	ND
2-Chloroethylvinyl ether	ND	ND	ND
Chloroform	ND	ND	ND
Chloromethane	ND	ND	ND
Dibromochloromethane	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND
1,1-Dichloroethene	35.0	34.0	ND
trans-1,2-Dichloroethene	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND
Ethyl benzene	ND	ND	ND
Methylene chloride	ND	1.5J	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND
Tetrachloroethene	ND	ND	ND
Toluene	44.0	43.0	ND
1,1,1-Trichloroethane	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND
Trichloroethene	46.0	46.0	ND
Trichlorofluoromethane	ND	ND	ND
Vinyl chloride	ND	ND	ND
Xylenes (Total)	ND	ND	ND

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1175B

QA SUMMARY - BLANK - 8/30/88

VOLATILE ORGANICS - WATER

<u>Parameter</u>	8/30/88	Detection Limit
	Lab Blank <u>Units: ug/l</u>	
Benzene	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
2-Chloroethylvinyl ether	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Ethyl benzene	ND	5.0
Methylene chloride	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl chloride	ND	10
Xylenes (Total)	ND	5.0

ENVIROTECH RESEARCH, INC.

QUALITY ASSURANCE SUMMARY

WATER VOLATILE SURROGATE RECOVERY
QA Batch No. 1175

ENVIROTECH SAMPLE #	S1 (TOL)	S2 (BFB)	S3 (DCE)	OTHER
01 Lab Blank (8/25)	98.1	95.6	98.0	
02 19243	104	96.3	103	
03 19244	111	102	105	
04 19248	112	106	111	
05 19278	111	105	98.7	
06 19279	108	97.6	99.1	
07 19280	111	104	104	
08 19281	107	99.4	94.8	
09 19282	102	99.4	94.8	
10 19283	109	91.6	87.3	
11 Lab Blank (8/29)	106	104	109	
12 19328	104	96.9	99.0	
13 19329	104	98.3	99.7	
14 19331	98.6	93.9	95.4	
15 19332	101	91.2	87.2	
16 19333	95.9	94.0	95.9	
17 19334	100	93.8	87.1	
18 19334SPK	101	93.9	88.9	
19 19334SPKDUP	98.8	91.1	91.5	
20 Lab Blank (8/30)	98.1	102	90.9	
21 19330	104	103	104	

S1 (TOL) = Toluene-d8
S2 (BFB) = Bromofluorobenzene
S3 (DCE) = 1,2-Dichloroethane-d4

QC LIMITS
(88-110)
(86-115)
(76-114)

ENVIROTECH RESEARCH, INC.

QUALITY ASSURANCE SUMMARY

WATER VOLATILE SURROGATE RECOVERY
QA Batch No. 1175

ENVIROTECH SAMPLE #	S1 (TOL)	S2 (BFB)	S3 (DCE)	OTHER
22 Lab Blank (9/1)	95.2	108	93.8	
23 19503	92.2	103	97.6	
24 19504	94.5	102	102	
25 Lab Blank (9/2)	105	102	92.5	
26 19505	98.8	101	91.9	
27 19418	101	101	98.2	

S1 (TOL) = Toluene-d8
S2 (BFB) = Bromofluorobenzene
S3 (DCE) = 1,2-Dichloroethane-d4

QC LIMITS

(88-110)
(86-115)
(76-114)

ENVIROTECH RESEARCH, INC.

QUALITY ASSURANCE SUMMARY

VOLATILES

WATER MATRIX SPIKE RECOVERY

<u>Sample #19334</u> <u>QA Batch #1175</u>	<u>AMOUNT</u> <u>ADDED (ng)</u>	<u>SAMPLE</u> <u>AMOUNT (ng)</u>	<u>MATRIX SPIKE</u> <u>AMOUNT (ng)</u>	<u>MS %</u> <u>REC</u>	<u>QC LIMIT</u> <u>RECOVERY</u>
1,1-Dichloroethene	250	0.0	170	68.0	61-145
Trichloroethene	250	0.0	232	92.8	71-120
Benzene	250	0.0	190	76.0	76-127
Toluene	250	0.0	214	83.2	76-125
Chlorobenzene	250	0.0	237	94.8	75-130

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch No. 1121

QA SUMMARY - DUPLICATE and BLANK

BASE/NEUTRAL EXTRACTABLES - WATER

<u>Parameter</u>	Sample	Duplicate	Lab Blank
	Lab No. 19278SPK <u>Units: ug/l</u>	Lab No. 19278SPK <u>Units: ug/l</u>	
1,3-Dichlorobenzene	ND	ND	ND
1,4-Dichlorobenzene	35.6	36.3	ND
Hexachloroethane	ND	ND	ND
Bis(2-chloroethyl) ether	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND
Bis(2-chloroisopropyl) ether	ND	ND	ND
N-Nitrosodi-n-propylamine	75.9	76.2	ND
Nitrobenzene	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND
1,2,4-Trichlorobenzene	42.0	41.3	ND
Isophorone	ND	ND	ND
Naphthalene	ND	ND	ND
Bis(2-chloroethoxy) methane	ND	ND	ND
Hexachlorocyclopentadiene	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND
Acenaphthylene	ND	ND	ND
Acenaphthene	80.2	80.1	ND
Dimethyl phthalate	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND
Fluorene	ND	ND	ND
4-Chlorophenyl phenyl ether	ND	ND	ND
2,4-Dinitrotoluene	85.8	83.0	ND
Diethylphthalate	ND	ND	ND
N-Nitrosodiphenylamine	ND	ND	ND
Hexachlorobenzene	ND	ND	ND

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch No. 1121

QA SUMMARY - DUPLICATE and BLANK

BASE/NEUTRAL EXTRACTABLES - WATER (con't)

<u>Parameter</u>	Sample	Duplicate	Lab Blank
	Lab No. 19278SPK <u>Units: ug/l</u>	Lab No. 19278SPK <u>Units: ug/l</u>	
4-Bromophenyl phenyl ether	ND	ND	ND
Phenanthrene	ND	ND	ND
Anthracene	ND	ND	ND
Dibutyl phthalate	112	110	ND
Fluoranthene	ND	ND	ND
Pyrene	96.7	89.7	ND
Benzidine	ND	ND	ND
Butyl benzyl phthalate	ND	ND	ND
Bis(2-ethylhexyl) phthalate	ND	ND	ND
Chrysene	ND	ND	ND
Benzo(a)anthracene	ND	ND	ND
3,3'-Dichlorobenzidine	ND	ND	ND
Di-n-octyl phthalate	ND	ND	ND
Benzo(b)fluoranthene	ND	ND	ND
Benzo(k)fluoranthene	ND	ND	ND
Benzo(a)pyrene	ND	ND	ND
Indeno(1,2,3-c,d)pyrene	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND
N-Nitrosodimethylamine	ND	ND	ND

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
N.J. Certified Lab No. 12543
QA Batch No. 1227

QA SUMMARY - DUPLICATE and BLANK

PETROLEUM HYDROCARBONS - WATER

#19377SPK Sample <u>Units: ppm</u>	#19377SPK Duplicate <u>Units: ppm</u>	Blank <u>Units: ppm</u>
16	15	ND

MATRIX SPIKE RECOVERY

Envirotech <u>Sample #</u>	AMOUNT <u>ADDED (ug)</u>	SAMPLE AMT. <u>(ug)</u>	MS AMT. <u>(ug)</u>	MS % <u>REC</u>
19377	6630	0.0	4660	70

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No. 12543
QA Batch 1121A

QA SUMMARY - BLANK - 8/19/88

BASE/NEUTRAL EXTRACTABLES - WATER (con't)

<u>Parameter</u>	8/19/88	Detection Limit
	Lab Blank <u>Units: ug/l</u>	
4-Bromophenyl phenyl ether	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Dibutyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	10
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	ND	10
Chrysene	ND	10
Benzo(a)anthracene	ND	10
3,3'-Dichlorobenzidine	ND	10
Di-n-octyl phthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(ghi)perylene	ND	10
N-Nitrosodimethylamine	ND	10

ATTACHMENT F33

ENVIROTECH RESEARCH, INC.QUALITY ASSURANCE SUMMARY
WATER SEMI-VOLATILE SURROGATE RECOVERY
QA Batch No. 1121

ENVIROTECH SAMPLE #	S1 (NBZ)	S2 (FBP)	S3 (TPH)	S4 (PHL)	S5 (2FP)	S6 (TBP)	OTHER
01 Lab Blank(8/18)	78.5	79.4	92.2	N/A	N/A	N/A	
02 19278	77.8	74.3	98.6	N/A	N/A	N/A	
03 19279	66.5	56.7	95.3	N/A	N/A	N/A	
04 19280	56.6	48.3	88.8	N/A	N/A	N/A	
05 19281	65.8	67.3	81.1	N/A	N/A	N/A	
06 19282	73.0	60.1	91.9	N/A	N/A	N/A	
07 19278SPK	80.9	68.4	108	N/A	N/A	N/A	
08 19278SPKDUP	78.5	64.3	101	N/A	N/A	N/A	
09 19326	80.1	83.7	94.3	N/A	N/A	N/A	
10 19324	74.3	83.7	94.1	N/A	N/A	N/A	
11 Lab Blank(8/19)	73.2	75.6	93.1	N/A	N/A	N/A	
12 19328	53.5	66.5	75.6	N/A	N/A	N/A	
13 19329	88.1	79.5	82.2	N/A	N/A	N/A	
14 19330	60.7	72.8	74.9	N/A	N/A	N/A	
15 19331	63.4	87.4	84.0	N/A	N/A	N/A	
16 Lab Blank(8/25)	69.2	64.8	88.2	N/A	N/A	N/A	
17 19411	60.7	68.7	89.7	N/A	N/A	N/A	
18 19418	56.5	63.2	88.1	N/A	N/A	N/A	

S1 (NBZ) = Nitrobenzene-d5
S2 (FBP) = 2-Fluorobiphenyl
S3 (TPH) = Terphenyl-d14
S4 (PHL) = Phenol-d5
S5 (2FP) = 2-Fluorophenol
S6 (TBP) = 2,4,6-Tribromophenol

QC LIMITS
(35-114)
(43-116)
(33-141)
(10-94)
(21-100)
(10-123)

ENVIROTECH RESEARCH, INC.

QUALITY ASSURANCE SUMMARY
WATER SEMI-VOLATILE SURROGATE RECOVERY
QA Batch No. 1121

ENVIROTECH SAMPLE #	S1 (NBZ)	S2 (FBP)	S3 (TPH)	S4 (PHL)	S5 (2FP)	S6 (TBP)	OTHER
19 Lab Blank(8/29)	82.8	80.7	106	N/A	N/A	N/A	
20 19449	77.8	80.0	94.7	N/A	N/A	N/A	
21 19474	83.4	85.8	103	N/A	N/A	N/A	
22 19495	85.5	83.9	107	N/A	N/A	N/A	

S1 (NBZ) = Nitrobenzene-d5
S2 (FBP) = 2-Fluorobiphenyl
S3 (TPH) = Terphenyl-d14
S4 (PHL) = Phenol-d5
S5 (2FP) = 2-Fluorophenol
S6 (TBP) = 2,4,6-Tribromophenol

QC LIMITS
(35-114)
(43-116)
(33-141)
(10-94)
(21-100)
(10-123)

ENVIROTECH RESEARCH, INC.

QUALITY ASSURANCE SUMMARY

SEMI-VOLATILES

WATER MATRIX SPIKE RECOVERY

Sample #19278 <u>QA Batch #1121</u>	AMOUNT <u>ADDED (ug)</u>	SAMPLE <u>AMOUNT (ug)</u>	MATRIX SPIKE <u>AMOUNT (ug)</u>	MS % <u>REC</u>	QC LIMITS <u>RECOVERY</u>
1,4-Dichlorobenzene	100	0.0	35.6	35.6	36-97
N-Nitroso-di-n-Propylamine	100	0.0	79.5	79.5	41-116
1,2,4-Trichlorobenzene	100	0.0	42.0	42.0	39-98
Acenaphthene	100	0.0	80.2	80.2	46-118
2,4-Dinitrotoluene	100	0.0	85.8	85.8	24-96
Pyrene	100	0.0	96.7	96.7	26-127

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
7 Atlantic Street
Hackensack, NJ 07601
Attention: Mr. William J. Seramba

Report Date: 9/13/88
Job No.: 4391
N.J. Certified Lab No.. 12543
QA Batch 1121A

QA SUMMARY - BLANK - 8/19/88

BASE/NEUTRAL EXTRACTABLES - WATER

<u>Parameter</u>	8/19/88	<u>Detection Limit</u> <u>Units: ug/l</u>
	<u>Lab Blank</u> <u>Units: ug/l</u>	
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Hexachloroethane	ND	10
Bis(2-chloroethyl) ether	ND	10
1,2-Dichlorobenzene	ND	10
Bis(2-chloroisopropyl) ether	ND	10
N-Nitrosodi-n-propylamine	ND	10
Nitrobenzene	ND	10
Hexachlorobutadiene	ND	10
1,2,4-Trichlorobenzene	ND	10
Isophorone	ND	10
Naphthalene	ND	10
Bis(2-chloroethoxy) methane	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Dimethyl phthalate	ND	10
2,6-Dinitrotoluene	ND	10
Fluorene	ND	10
4-Chlorophenyl phenyl ether	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
N-Nitrosodiphenylamine	ND	10
Hexachlorobenzene	ND	10

ATTACHMENT F37

ATTACHMENT G

FRAZIER & FRAZIER
ATTORNEYS AT LAW
SUITE A
1515 RIVERSIDE AVENUE
JACKSONVILLE, FLORIDA 32204

WILLIAM R. FRAZIER
W. ROBINSON FRAZIER

(904) 353-5616

October 21, 1988

NJDEP
Industrial Site
Evaluation Element
CN 028
Trenton, NJ 08625

Mr. Blaine Fresco
New Jersey Department of Environmental Protection
Industrial Site Evaluation Element
CN 028
Trenton, New Jersey 08625

Re: ECRA sampling plan for Guignon & Green Company
facility, Kearny, New Jersey, ECRA Case No. 86-034

Dear Mr. Fresco:

In connection with the above referenced ECRA case, please find enclosed herewith a copy of the proposed final form of Negative Declaration, which I would appreciate your reviewing for technical sufficiency.

Please let me know whether or not you find the exact language and/or other terms and provisions of this proposed Negative Declaration to be satisfactory so that, if changes are necessary, a fully executed and technically sufficient Negative Declaration can be submitted to your office at the proper time.

As you know, this particular ECRA case is quite old and therefore warrants expeditious treatment.

Please be advised that the SIC Number of Cali Carting, Inc., which is the proposed buyer of this property, is 4212.

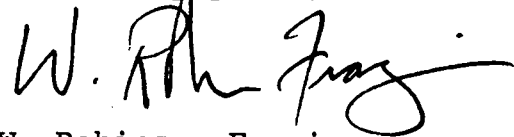
Further, please advise as to whether or not a "consignment letter" will be necessary in this case. In that regard, as set forth in paragraph 4 c. of the proposed Negative Declaration, there are no sources of pollution on the property which the proposed buyer will continue to use. Also, paragraph 3 of the proposed Negative Declaration describes the use to which the buyer will put the subject real estate in the future.

ATTACHMENT G1

Mr. Blaine Fresco
October 21, 1988
Page 2

Thank you very much for your prompt attention to this matter.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'W. Robinson Frazier', with a stylized, flowing script.

W. Robinson Frazier

WRF:jvs
Enclosure

cc: Frank A. Darabi, P.E.
Dan Nachman

ATTACHMENT G2

STATE OF FLORIDA

COUNTY OF DIXIE

NEGATIVE DECLARATION

VICTORIA M. YOKSA, of full age, being duly sworn upon her oath, deposes and says as follows:

1. I am Vice President of Guignon & Green Company, a Florida corporation (hereinafter the "company"), which owns certain property located within the State of New Jersey identified generally as 410 Bergen Avenue, Town of Kearny, Hudson County, New Jersey 07032 ("the property" or "the site"). The property is shown on the municipal tax map as Lot 3C, in Block 252.

2. The transactions for which an ECRA review has been initiated are both a cessation of operations and a sale of the property. The parties to the sales transaction are Guignon & Green Company, as seller, and John F. Cali, Jr., as buyer.

3. The buyer's controlled corporation, Cali Carting, Inc., will conduct its business at the property following the closing of this transaction. To the best knowledge and belief of the affiant, the primary use for which the property will be put by Cali Carting, Inc. is that of the parking and storage of the fleet of trucks and other related assets utilized by Cali Carting, Inc. in its business.

4. The property meets the criteria for a negative declaration for the following reasons:

a. There have been no spills of hazardous substances or wastes on the site, and therefore, there remain no hazardous substances or wastes on the site.

b. Along one of the boundaries of the site flows a ditch which has effluents from various sources, including a nearby landfill which may account for a substantial portion of the parameters detected in the ditch water and on the site. The site is periodically (at least annually) inundated by water overflowing from the ditch which leaves residues from the ditch water on the site.

c. There is not currently, nor has there ever been in the past, a continuous source of pollution, (i.e., underground tanks, impoundments or the like) on the site, and there is presently no activity taking place on the site which would contribute to further contamination.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

ATTACHMENT G3

In addition, I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based

significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Victoria M. Yoksa, as
Vice President
Guignon & Green Company

Sworn to and Subscribed to
before me this ____ day of October 1988

Notary Public, State of Florida at large

My commission expires: _____

ATTACHMENT GA

ATTACHMENT H

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1480

PETROLEUM HYDROCARBONS

Envirotech Sample #	Client ID	% Solid	Petroleum Hydrocarbons mg/kg (Dry Wt.)
28688	D-1	88.7	2310
28689	D-2	82.0	13200
28690	D-3	79.7	1790
28691	D-4	85.0	434
28693	D-6 D-5	83.1	240
28694	B-C	83.6	3400
28695	A-1D	49.0	2380
28696	C-2	84.1	60
28697	C-1	71.2	370
28698	C-3	85.9	63
28699	C-4	79.3	1660
28700	C-5	77.2	9540
28701	C-6	89.6	297
28702	C-7	75.5	288
28703	C-8	71.4	7940
28704	B-1	79.8	1760
28705	B-2	73.5	8780
28706	B-3	34.7	3500
28707	B-4	86.6	15200
28708	B-5	72.4	2920

Detection Limit for Petroleum Hydrocarbon is 25 mg/kg.

ATTACHMENT

H1

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1396

VOLATILE ORGANICS

	Lab No. 28692	
	Client ID: D-5	
	82.7% Solid	
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
Benzene	ND	500
Bromodichloromethane	ND	500
Bromoform	ND	500
Bromomethane	ND	1000
Carbon tetrachloride	2500B	500
Chlorobenzene	ND	500
Chloroethane	ND	1000
2-Chloroethylvinyl ether	ND	1000
Chloroform	ND	500
Chloromethane	ND	1000
Dibromochloromethane	ND	500
1,1-Dichloroethane	ND	500
1,2-Dichloroethane	ND	500
1,1-Dichloroethene	ND	500
trans-1,2-Dichloroethene	ND	500
1,2-Dichloropropane	ND	500
cis-1,3-Dichloropropene	ND	500
trans-1,3-Dichloropropene	ND	500
Ethyl benzene	ND	500
Methylene chloride	ND	500
1,1,2,2-Tetrachloroethane	ND	500
Tetrachloroethene	210J	500
Toluene	ND	500
1,1,1-Trichloroethane	6630B	500
1,1,2-Trichloroethane	ND	500
Trichloroethene	ND	500
Trichlorofluoromethane	330J	500
Vinyl chloride	ND	1000
Xylenes (Total)	ND	500

ATTACHMENT H2

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

EP-Toxicity Parameter	Lab No. 28694 Client ID: B-C	Maximum	Detection
	Result (mg/l)	Conc. (mg/l)	Limit (mg/l)
Arsenic	ND	5.0	0.5
Barium	ND	100	0.5
Cadmium	ND	1.0	0.10
Chromium	ND	5.0	0.20
Lead	ND	5.0	0.20
Mercury	ND	0.2	0.0002
Selenium	ND	1.0	0.2
Silver	ND	5.0	0.10
Copper	ND		0.10
Zinc	ND		0.10
Parameter	Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	3400	30000	25
pH	8.24 (standard units)		
Percent Solids	83.6%		
CORROSIVITY	Non-corrosive		
IGNITABILITY	>160°F		

ATTACHMENT A3

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1248

PCBs

Lab No. 28694

Client ID: B-C

83.6% Solid

Parameter

Units: ug/kg (Dry Weight)

Detection Limit

Units: ug/kg

PCB-1016
PCB-1221
PCB-1232
PCB-1242
PCB-1248
PCB-1254
PCB-1260

ND
ND
ND
ND
ND
ND
ND

200
200
200
200
200
200
200

ATTACHMENT HA

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1248

PCBs

Lab No. 28695
Client ID: A-1D
49.0% Solid

Parameter

Units: ug/kg (Dry Weight)

Detection Limit
Units: ug/kg

PCB-1016
PCB-1221
PCB-1232
PCB-1242
PCB-1248
PCB-1254
PCB-1260

ND
ND
ND
ND
ND
ND
200

200
200
200
200
200
200
200

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

EP-Toxicity Parameter	Lab No. 28695 Client ID: A-1D	Maximum	Detection
	Result (mg/l)	Conc. (mg/l)	Limit (mg/l)
Arsenic	ND	5.0	0.5
Barium	ND	100	0.5
Cadmium	ND	1.0	0.10
Chromium	ND	5.0	0.20
Lead	ND	5.0	0.20
Mercury	ND	0.2	0.0002
Selenium	ND	1.0	0.2
Silver	ND	5.0	0.10
Copper	ND		0.10
Zinc	ND		0.10
Parameter	Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	2380	30000	25
pH	7.58 (standard units)		
Percent Solids	49.0%		
CORROSIVITY	Non-corrosive		
IGNITABILITY	>160°F		

ATTACHMENT 146

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1406B

VOLATILE ORGANICS

	Lab No. 28696	
	Client ID: C-2	
	84.1% Solid	
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit Units: ug/kg</u>
Benzene	ND	500
Bromodichloromethane	ND	500
Bromoform	ND	500
Bromomethane	ND	1000
Carbon tetrachloride	1500B	500
Chlorobenzene	ND	500
Chloroethane	ND	1000
2-Chloroethylvinyl ether	ND	1000
Chloroform	ND	500
Chloromethane	ND	1000
Dibromochloromethane	ND	500
1,1-Dichloroethane	ND	500
1,2-Dichloroethane	ND	500
1,1-Dichloroethene	ND	500
trans-1,2-Dichloroethene	ND	500
1,2-Dichloropropane	ND	500
cis-1,3-Dichloropropene	ND	500
trans-1,3-Dichloropropene	ND	500
Ethyl benzene	ND	500
Methylene chloride	ND	500
1,1,2,2-Tetrachloroethane	ND	500
Tetrachloroethene	420J	500
Toluene	190J	500
1,1,1-Trichloroethane	3400B	500
1,1,2-Trichloroethane	ND	500
Trichloroethene	ND	500
Trichlorofluoromethane	850	500
Vinyl chloride	ND	1000
Xylenes (Total)	ND	500

ATTACHMENT H7

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263E

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Hexachloroethane	ND	330
Bis(2-chloroethyl) ether	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl) ether	ND	330
N-Nitrosodi-n-propylamine	ND	330
Nitrobenzene	ND	330
Hexachlorobutadiene	ND	330
1,2,4-Trichlorobenzene	ND	330
Isophorone	ND	330
Naphthalene	ND	330
Bis(2-chloroethoxy) methane	ND	330
Hexachlorocyclopentadiene	ND	660
2-Chloronaphthalene	ND	330
Acenaphthylene	30J	330
Acenaphthene	72J	330
Dimethyl phthalate	ND	330
2,6-Dinitrotoluene	ND	330
Fluorene	96J	330
4-Chlorophenyl phenyl ether	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
N-Nitrosodiphenylamine	ND	330
Hexachlorobenzene	ND	330

ATTACHMENT H8

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263E

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 28696 Client ID: C-2 84.1% Solid <u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
4-Bromophenyl phenyl ether	ND	330
Phenanthrene	839	330
Anthracene	190J	330
Dibutyl phthalate	ND	330
Fluoranthene	1230	330
Pyrene	904	330
Benzidine	ND	660
Butyl benzyl phthalate	ND	330
Bis(2-ethylhexyl) phthalate	100JB	330
Chrysene	543	330
Benzo(a)anthracene	466	330
3,3'-Dichlorobenzidine	ND	660
Di-n-octyl phthalate	ND	330
Benzo(b)fluoranthene	1000	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	482	330
Indeno(1,2,3-c,d)pyrene	160J	330
Dibenzo(a,h)anthracene	44J	330
Benzo(ghi)perylene	120J	330
N-Nitrosodimethylamine	ND	330

ATTACHMENT H9

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1406

VOLATILE ORGANICS

	Lab No. 28701	
	Client ID: C-6	
	89.6% Solid	
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
Benzene	ND	1300
Bromodichloromethane	ND	1300
Bromoform	ND	1300
Bromomethane	ND	2500
Carbon tetrachloride	510JB	1300
Chlorobenzene	ND	1300
Chloroethane	ND	2500
2-Chloroethylvinyl ether	ND	2500
Chloroform	ND	1300
Chloromethane	ND	2500
Dibromochloromethane	ND	1300
1,1-Dichloroethane	ND	1300
1,2-Dichloroethane	ND	1300
1,1-Dichloroethene	ND	1300
trans-1,2-Dichloroethene	ND	1300
1,2-Dichloropropane	ND	1300
cis-1,3-Dichloropropene	ND	1300
trans-1,3-Dichloropropene	ND	1300
Ethyl benzene	ND	1300
Methylene chloride	ND	1300
1,1,2,2-Tetrachloroethane	ND	1300
Tetrachloroethene	ND	1300
Toluene	330J	1300
1,1,1-Trichloroethane	1100JB	1300
1,1,2-Trichloroethane	ND	1300
Trichloroethene	ND	1300
Trichlorofluoromethane	570J	1300
Vinyl chloride	ND	2500
Xylenes (Total)	ND	1300

ATTACHMENT H10-

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES

	Lab No. 28701	
	Client ID: C-6	
	89.6% Solid	
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
1,3-Dichlorobenzene	ND	3300
1,4-Dichlorobenzene	ND	3300
Hexachloroethane	ND	3300
Bis(2-chloroethyl) ether	ND	3300
1,2-Dichlorobenzene	ND	3300
Bis(2-chloroisopropyl) ether	ND	3300
N-Nitrosodi-n-propylamine	ND	3300
Nitrobenzene	ND	3300
Hexachlorobutadiene	ND	3300
1,2,4-Trichlorobenzene	ND	3300
Isophorone	ND	3300
Naphthalene	ND	3300
Bis(2-chloroethoxy) methane	ND	3300
Hexachlorocyclopentadiene	ND	6600
2-Chloronaphthalene	ND	3300
Acenaphthylene	100J	3300
Acenaphthene	200J	3300
Dimethyl phthalate	ND	3300
2,6-Dinitrotoluene	ND	3300
Fluorene	200J	3300
4-Chlorophenyl phenyl ether	ND	3300
2,4-Dinitrotoluene	ND	3300
Diethylphthalate	ND	3300
N-Nitrosodiphenylamine	ND	3300
Hexachlorobenzene	ND	3300

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
4-Bromophenyl phenyl ether	ND	3300
Phenanthrene	67CJ	3300
Anthracene	200J	3300
Dibutyl phthalate	ND	3300
Fluoranthene	860J	3300
Pyrene	76CJ	3300
Benzidine	ND	6600
Butyl benzyl phthalate	ND	3300
Bis(2-ethylhexyl) phthalate	580JB	3300
Chrysene	450J	6600
Benzo(a)anthracene	400J	3300
3,3'-Dichlorobenzidine	ND	3300
Di-n-octyl phthalate	ND	3300
Benzo(b)fluoranthene	640J	3300
Benzo(k)fluoranthene	ND	3300
Benzo(a)pyrene	410J	3300
Indeno(1,2,3-c,d)pyrene	300J	3300
Dibenzo(a,h)anthracene	ND	3300
Benzo(ghi)perylene	400J	3300
N-Nitrosodimethylamine	ND	3300

ATTACHMENT H12

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1406

VOLATILE ORGANICS

Lab No. 28704		
Client ID: B-1		
79.8% Solid		
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit Units: ug/kg</u>
Benzene	ND	1300
Bromodichloromethane	ND	1300
Bromoform	ND	1300
Bromomethane	ND	2500
Carbon tetrachloride	760JB	1300
Chlorobenzene	ND	1300
Chloroethane	ND	2500
2-Chloroethylvinyl ether	ND	2500
Chloroform	ND	1300
Chloromethane	ND	2500
Dibromochloromethane	ND	1300
1,1-Dichloroethane	ND	1300
1,2-Dichloroethane	ND	1300
1,1-Dichloroethene	ND	1300
trans-1,2-Dichloroethene	ND	1300
1,2-Dichloropropane	ND	1300
cis-1,3-Dichloropropene	ND	1300
trans-1,3-Dichloropropene	ND	1300
Ethyl benzene	ND	1300
Methylene chloride	ND	1300
1,1,2,2-Tetrachloroethane	ND	1300
Tetrachloroethene	ND	1300
Toluene	2200	1300
1,1,1-Trichloroethane	1700B	1300
1,1,2-Trichloroethane	ND	1300
Trichloroethene	ND	1300
Trichlorofluoromethane	680J	1300
Vinyl chloride	ND	2500
Xylenes (Total)	850J	1300

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES

Lab No. 28704		
Client ID: B-1		
79.8% Solid		
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
1,3-Dichlorobenzene	ND	6600
1,4-Dichlorobenzene	ND	6600
Hexachloroethane	ND	6600
Bis(2-chloroethyl) ether	ND	6600
1,2-Dichlorobenzene	ND	6500
Bis(2-chloroisopropyl) ether	ND	6600
N-Nitrosodi-n-propylamine	ND	6600
Nitrobenzene	ND	6600
Hexachlorobutadiene	ND	6600
1,2,4-Trichlorobenzene	ND	6600
Isophorone	ND	6600
Naphthalene	ND	6600
Bis(2-chloroethoxy) methane	ND	6600
Hexachlorocyclopentadiene	ND	6600
2-Chloronaphthalene	ND	6600
Acenaphthylene	ND	6600
Acenaphthene	400J	6600
Dimethyl phthalate	ND	6600
2,6-Dinitrotoluene	ND	6600
Fluorene	700J	6600
4-Chlorophenyl phenyl ether	ND	6600
2,4-Dinitrotoluene	ND	6600
Diethylphthalate	ND	6600
N-Nitrosodiphenylamine	ND	6600
Hexachlorobenzene	ND	6600

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 28704 Client ID: B-1 79.8% Solid <u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
4-Bromophenyl phenyl ether	ND	6600
Phenanthrene	2800J	6600
Anthracene	800J	6600
Dibutyl phthalate	ND	6600
Fluoranthene	3000J	6600
Pyrene	2500J	6600
Benzidine	ND	13000
Butyl benzyl phthalate	ND	6600
Bis(2-ethylhexyl) phthalate	ND	6600
Chrysene	1600J	6600
Benzo(a)anthracene	1300J	6600
3,3'-Dichlorobenzidine	ND	13000
Di-n-octyl phthalate	ND	6600
Benzo(b)fluoranthene	2500J	6600
Benzo(k)fluoranthene	ND	6600
Benzo(a)pyrene	1600J	6600
Indeno(1,2,3-c,d)pyrene	1100J	6600
Dibenzo(a,h)anthracene	ND	6600
Benzo(ghi)perylene	880J	6600
N-Nitrosodimethylamine	ND	6600

ATTACHMENT HIS

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1406B

VOLATILE ORGANICS

	Lab No. 28707	
	Client ID: B-4	
	86.6% Solid	
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
Benzene	ND	2500
Bromodichloromethane	ND	2500
Bromoform	ND	2500
Bromomethane	ND	5000
Carbon tetrachloride	ND	2500
Chlorobenzene	ND	2500
Chloroethane	ND	5000
2-Chloroethylvinyl ether	ND	5000
Chloroform	ND	2500
Chloromethane	ND	5000
Dibromochloromethane	ND	2500
1,1-Dichloroethane	ND	2500
1,2-Dichloroethane	ND	2500
1,1-Dichloroethene	ND	2500
trans-1,2-Dichloroethene	ND	2500
1,2-Dichloropropane	ND	2500
cis-1,3-Dichloropropene	ND	2500
trans-1,3-Dichloropropene	ND	2500
Ethyl benzene	2800J	2500
Methylene chloride	ND	2500
1,1,2,2-Tetrachloroethane	ND	2500
Tetrachloroethene	ND	2500
Toluene	11000	2500
1,1,1-Trichloroethane	ND	2500
1,1,2-Trichloroethane	ND	2500
Trichloroethene	ND	2500
Trichlorofluoromethane	ND	2500
Vinyl chloride	ND	5000
Xylenes (Total)	8300	2500

ATTACHMENT H16

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES

Lab No. 28707		
Client ID: B-4		
86.6% Solid		
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
1,3-Dichlorobenzene	ND	42000
1,4-Dichlorobenzene	ND	42000
Hexachloroethane	ND	42000
Bis(2-chloroethyl) ether	ND	42000
1,2-Dichlorobenzene	ND	42000
Bis(2-chloroisopropyl) ether	ND	42000
N-Nitrosodi-n-propylamine	ND	42000
Nitrobenzene	ND	42000
Hexachlorobutadiene	ND	42000
1,2,4-Trichlorobenzene	ND	42000
Isophorone	ND	42000
Naphthalene	ND	42000
Bis(2-chloroethoxy) methane	ND	42000
Hexachlorocyclopentadiene	ND	83000
2-Chloronaphthalene	ND	42000
Acenaphthylene	ND	42000
Acenaphthene	ND	42000
Dimethyl phthalate	ND	42000
2,6-Dinitrotoluene	ND	42000
Fluorene	ND	42000
4-Chlorophenyl phenyl ether	ND	42000
2,4-Dinitrotoluene	ND	42000
Diethylphthalate	ND	42000
N-Nitrosodiphenylamine	ND	42000
Hexachlorobenzene	ND	42000

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 28707 Client ID: B-4 86.6% Solid <u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
4-Bromophenyl phenyl ether	ND	42000
Phenanthrene	6400J	42000
Anthracene	ND	42000
Dibutyl phthalate	ND	42000
Fluoranthene	3000J	42000
Pyrene	3000J	42000
Benzidine	ND	83000
Butyl benzyl phthalate	ND	42000
Bis(2-ethylhexyl) phthalate	ND	42000
Chrysene	1000J	42000
Benzo(a)anthracene	ND	42000
3,3'-Dichlorobenzidine	ND	83000
Di-n-octyl phthalate	ND	42000
Benzo(b)fluoranthene	ND	42000
Benzo(k)fluoranthene	ND	42000
Benzo(a)pyrene	ND	42000
Indeno(1,2,3-c,d)pyrene	ND	42000
Dibenzo(a,h)anthracene	ND	42000
Benzo(ghi)perylene	ND	42000
N-Nitrosodimethylamine	ND	42000

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1481

PETROLEUM HYDROCARBONS

<u>Envirotech Sample #</u>	<u>Client ID</u>	<u>% Solid</u>	<u>Petroleum Hydrocarbons mg/kg (Dry Wt.)</u>
28709	B-6	85.0	4560
28710	B-7	76.4	4580
28711	B-8	65.4	6040
28712	A-1	71.9	338
28713	A-2	72.3	1670
28714	A-3	71.2	43
28715	A-4	75.5	47
28716	A-5	73.8	ND
28717	A-6	68.5	424
28718	A-7	64.0	318
28719	A-8	73.9	217

Detection Limit for Petroleum Hydrocarbon is 25 mg/kg.

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES

Lab No. 28711		
Client ID: B-8		
65.4% Solid		
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
1,3-Dichlorobenzene	ND	1700
1,4-Dichlorobenzene	ND	1700
Hexachloroethane	ND	1700
Bis(2-chloroethyl) ether	ND	1700
1,2-Dichlorobenzene	ND	1700
Bis(2-chloroisopropyl) ether	ND	1700
N-Nitrosodi-n-propylamine	ND	1700
Nitrobenzene	ND	1700
Hexachlorobutadiene	ND	1700
1,2,4-Trichlorobenzene	ND	1700
Isophorone	ND	1700
Naphthalene	270J	1700
Bis(2-chloroethoxy) methane	ND	1700
Hexachlorocyclopentadiene	ND	3300
2-Chloronaphthalene	ND	1700
Acenaphthylene	ND	1700
Acenaphthene	ND	1700
Dimethyl phthalate	ND	1700
2,6-Dinitrotoluene	ND	1700
Fluorene	ND	1700
4-Chlorophenyl phenyl ether	ND	1700
2,4-Dinitrotoluene	ND	1700
Diethylphthalate	ND	1700
N-Nitrosodiphenylamine	ND	1700
Hexachlorobenzene	ND	1700

ATTACHMENT H20

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 28711 Client ID: B-8 65.4% Solid <u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
4-Bromophenyl phenyl ether	ND	1700
Phenanthrene	1300J	1700
Anthracene	200J	1700
Dibutyl phthalate	ND	1700
Fluoranthene	1200J	1700
Pyrene	1400J	1700
Benzidine	ND	3300
Butyl benzyl phthalate	ND	1700
Bis(2-ethylhexyl) phthalate	ND	1700
Chrysene	1100J	1700
Benzo(a)anthracene	740J	1700
3,3'-Dichlorobenzidine	ND	3300
Di-n-octyl phthalate	ND	1700
Benzo(b)fluoranthene	1100J	1700
Benzo(k)fluoranthene	ND	1700
Benzo(a)pyrene	ND	1700
Indeno(1,2,3-c,d)pyrene	ND	1700
Dibenzo(a,h)anthracene	ND	1700
Benzo(ghi)perylene	ND	1700
N-Nitrosodimethylamine	ND	1700

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1402B

VOLATILE ORGANICS

	Lab No. 28716	
	Client ID: A-5	
	73.8% Solid	
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
Benzene	ND	25
Bromodichloromethane	ND	25
Bromoform	ND	25
Bromomethane	ND	50
Carbon tetrachloride	ND	25
Chlorobenzene	ND	25
Chloroethane	ND	50
2-Chloroethylvinyl ether	ND	50
Chloroform	ND	25
Chloromethane	ND	50
Dibromochloromethane	ND	25
1,1-Dichloroethane	ND	25
1,2-Dichloroethane	ND	25
1,1-Dichloroethene	ND	25
trans-1,2-Dichloroethene	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
trans-1,3-Dichloropropene	ND	25
Ethyl benzene	ND	25
Methylene chloride	ND	25
1,1,2,2-Tetrachloroethane	ND	25
Tetrachloroethene	ND	25
Toluene	ND	25
1,1,1-Trichloroethane	ND	25
1,1,2-Trichloroethane	ND	25
Trichloroethene	ND	25
Trichlorofluoromethane	ND	25
Vinyl chloride	ND	50
Xylenes (Total)	ND	25

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Hexachloroethane	ND	330
Bis(2-chloroethyl) ether	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl) ether	ND	330
N-Nitrosodi-n-propylamine	ND	330
Nitrobenzene	ND	330
Hexachlorobutadiene	ND	330
1,2,4-Trichlorobenzene	ND	330
Isophorone	ND	330
Naphthalene	ND	330
Bis(2-chloroethoxy) methane	ND	330
Hexachlorocyclopentadiene	ND	660
2-Chloronaphthalene	ND	330
Acenaphthylene	ND	330
Acenaphthene	ND	330
Dimethyl phthalate	ND	330
2,6-Dinitrotoluene	ND	330
Fluorene	ND	330
4-Chlorophenyl phenyl ether	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
N-Nitrosodiphenylamine	ND	330
Hexachlorobenzene	ND	330

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES (con't)

<u>Parameter</u>	Lab No. 28716 Client ID: A-5 73.8% Solid <u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
4-Bromophenyl phenyl ether	ND	330
Phenanthrene	55J	330
Anthracene	20J	330
Dibutyl phthalate	ND	330
Fluoranthene	160J	330
Pyrene	140J	330
Benzidine	ND	660
Butyl benzyl phthalate	ND	330
Bis(2-ethylhexyl) phthalate	642B	330
Chrysene	100J	330
Benzo(a)anthracene	78J	330
3,3'-Dichlorobenzidine	ND	660
Di-n-octyl phthalate	ND	330
Benzo(b)fluoranthene	200J	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	88J	330
Indeno(1,2,3-c,d)pyrene	100J	330
Dibenzo(a,h)anthracene	ND	330
Benzo(ghi)perylene	94J	330
N-Nitrosodimethylamine	ND	330

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1402B

VOLATILE ORGANICS

Lab No. 28719		
Client ID: A-8		
73.9% Solid		
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>	<u>Detection Limit</u> <u>Units: ug/kg</u>
Benzene	ND	25
Bromodichloromethane	ND	25
Bromoform	ND	25
Bromomethane	ND	50
Carbon tetrachloride	ND	25
Chlorobenzene	ND	25
Chloroethane	ND	50
2-Chloroethylvinyl ether	ND	50
Chloroform	ND	25
Chloromethane	ND	50
Dibromochloromethane	ND	25
1,1-Dichloroethane	ND	25
1,2-Dichloroethane	ND	25
1,1-Dichloroethene	ND	25
trans-1,2-Dichloroethene	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
trans-1,3-Dichloropropene	ND	25
Ethyl benzene	ND	25
Methylene chloride	29B	25
1,1,2,2-Tetrachloroethane	ND	25
Tetrachloroethene	ND	25
Toluene	ND	25
1,1,1-Trichloroethane	ND	25
1,1,2-Trichloroethane	ND	25
Trichloroethene	ND	25
Trichlorofluoromethane	ND	25
Vinyl Chloride	ND	50
Xylenes (Total)	ND	25

ATTACHMENT H25

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES

<u>Parameter</u>	Lab No. 28719 Client ID: A-8 73.9% Solid <u>Units: ug/kg (Dry Weight)</u>	Detection Limit <u>Units: ug/kg</u>
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Hexachloroethane	ND	330
Bis(2-chloroethyl) ether	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl) ether	ND	330
N-Nitrosodi-n-propylamine	ND	330
Nitrobenzene	ND	330
Hexachlorobutadiene	ND	330
1,2,4-Trichlorobenzene	ND	330
Isophorone	ND	330
Naphthalene	110J	330
Bis(2-chloroethoxy) methane	ND	330
Hexachlorocyclopentadiene	ND	660
2-Chloronaphthalene	ND	330
Acenaphthylene	61J	330
Acenaphthene	200J	330
Dimethyl phthalate	ND	330
2,6-Dinitrotoluene	ND	330
Fluorene	290J	330
4-Chlorophenyl phenyl ether	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
N-Nitrosodiphenylamine	ND	330
Hexachlorobenzene	ND	330

ATTACHMENT H26

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch 1263C

BASE/NEUTRAL EXTRACTABLES (con't)

Lab No. 28719 Client ID: A-8 73.9% Solid			Detection Limit
<u>Parameter</u>	<u>Units: ug/kg (Dry Weight)</u>		<u>Units: ug/kg</u>
4-Bromophenyl phenyl ether	ND		330
Phenanthrene	2690		330
Anthracene	687		330
Dibutyl phthalate	ND		330
Fluoranthene	2860		330
Pyrene	3040		330
Benzidine	ND		660
Butyl benzyl phthalate	ND		330
Bis(2-ethylhexyl) phthalate	400B		330
Chrysene	1900		330
Benzo(a)anthracene	1730		330
3,3'-Dichlorobenzidine	ND		660
Di-n-octyl phthalate	ND		330
Benzo(b)fluoranthene	3160		330
Benzo(k)fluoranthene	ND		330
Benzo(a)pyrene	1700		330
Indeno(1,2,3-c,d)pyrene	1000		330
Dibenzo(a,h)anthracene	100J		330
Benzo(ghi)perylene	970		330
N-Nitrosodimethylamine	ND		330

ATTACHMENT H27

ENVIROTECH RESEARCH, INC.

Geraghty & Miller
290 Vincent Avenue
Hackensack, NJ 07601
Attention: Mr. Anthony Rana

Report Date: 10/20/89
Job No.: 5794 - Kearny
N.J. Certified Lab No. 12543
QA Batch No. 1396

QA SUMMARY - DUPLICATE and BLANK**VOLATILE ORGANICS - SOIL**

<u>Parameter</u>	Sample	Duplicate	10/4/89 Lab Blank ug/kg
	Lab No. 28692SPK 82.7% Solid ug/kg (Dry Wt.)	Lab No. 28692SPK 82.7% Solid ug/kg (Dry Wt.)	
Benzene	7770	8000	ND
Bromodichloromethane	ND	ND	ND
Bromoform	ND	ND	ND
Bromomethane	ND	ND	ND
Carbon tetrachloride	3170	5130	ND
Chlorobenzene	8180	8560	ND
Chloroethane	ND	ND	ND
2-Chloroethylvinyl ether	ND	ND	ND
Chloroform	110J	130J	ND
Chloromethane	ND	ND	ND
Dibromochloromethane	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND
1,1-Dichloroethene	7130	7520	ND
trans-1,2-Dichloroethene	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND
Ethyl benzene	ND	ND	ND
Methylene chloride	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND
Tetrachloroethene	293J	760	ND
Toluene	7400	7870	ND
1,1,1-Trichloroethane	7750	12600	ND
1,1,2-Trichloroethane	ND	ND	ND
Trichloroethene	7440	7920	ND
Trichlorofluoromethane	550	1000	ND
Vinyl chloride	ND	ND	ND
Xylenes (Total)	ND	ND	ND

ATTACHMENT 1428

ATTACHMENT I



November 16, 1989

Blaine Fresco
Bureau of ECRA Applicability and Compliance
New Jersey Department of Environmental Protection
401 E. State Street
5th Floor East
CN028
Trenton, New Jersey 08625

NJDEP
Industrial Site
Evaluation Element
CN 028
Trenton, NJ 08625
NOV 17 1989

Re: The Guignon & Green Site, Kearny, New Jersey, ECRA Case #86034

Dear Mr. Fresco:

Geraghty & Miller, Inc. has reviewed the laboratory analytical results from the post-excavation soil sampling event conducted at the Guignon & Green site in Kearny, New Jersey on September 28, 1989. The results of the soil laboratory analysis are summarized in Table 1. A complete copy of the results from the laboratory, Envirotech Research, Inc. of Edison, New Jersey, is enclosed for your review.

Adhering to specifications of the sampling plan submitted to the NJDEP on April 3, 1989, four discrete areas were excavated and sampled. The volume of soil excavated was determined by visual observations and readings on a Photoionization Detector (PID). The four areas excavated, designated A through D, correspond to areas 4, 3, 2, and 1 of the cleanup plan respectively, and are shown on Figures 1, 2 and 3.

Area A is in the vicinity of the former drum staging area. The area excavated was approximately 23 feet long and 90 feet wide, with an extended 5 foot by 5 foot area at the southwest corner. The average depth of the excavation was approximately 2.8 feet below land surface (bls). Water was noticed seeping into the excavation about 6 inches bls along the south side. The general stratigraphy encountered consisted of approximately 0.5 feet

ATTACHMENT I

of brown fill, underlain by approximately 2.5 feet of dark grey clay within a brown clay and peat matrix.

Area B is in the vicinity of the former tank No. 7 spill area, approximately 110 to 120 feet east of the warehouse. The excavated area was approximately 10 feet by 10 feet with an average depth of approximately 2.5 to 3 feet bls. The general stratigraphy encountered within this excavation consisted of a top layer of fill underlain by dark brown and reddish brown silt and clay with peat containing irregularly distributed dark grey to black clay. The soil excavated beneath the fill is not discernably stratified.

Area C is in the vicinity of the former diesel fuel tank area, approximately three feet east of the pumphouse and four to five feet from the northern property fence. The area excavated was approximately 21 feet long by 12 feet wide, with an average depth of 3.5 to 4.0 feet bls. The general stratigraphy encountered within the excavation was a top layer of dark reddish brown silt and clay fill, underlain by black and brown peat and clay with irregularly distributed patches of bluish dark grey to black clay with some reddish brown clay and silt.

The location of Area D is three feet from the pumphouse and seven feet from the building adjacent to the pumphouse. The area excavated was approximately 6 feet by 6 feet, with an average depth of approximately 2.5 feet bls. The general stratigraphy encountered within the excavation was a top layer of asphalt underlain by non-stratified brownish to grey clay and silt, to mottled reddish brown to grey clay and silt.

The excavation in each area, proceeded to the point practical, i.e., down to the water table and to the point where reddish soils predominated, and grey soils were minimal. Ponded water inundating the site along the northern boundary of Area C prevented further excavation. PID measurements ranged from relatively low readings of 1 ppm within Area B to as high as 30 ppm within Area C. In each of the remaining excavations, PID readings were between 4 to 5 ppm and 5 to 10 ppm in Areas A and D, respectively.

Post-excavation samples were collected from the walls and corners of the excavations, approximately one foot above the bottom. Clean plastic sheeting was positioned on the perimeter of each excavation, on which all sampling equipment was placed. At each sample location within the excavation field decontaminated trowels were used to collect the soil samples. Soil samples were then screened using the PID and examined for visual evidence of contamination. Laboratory-supplied sample containers were then filled with as much sample as possible, in order to minimize the amount of head space. Samples were then stored within laboratory supplied coolers until relinquished to an overnight carrier for delivery to Envirotech Research Laboratories of Edison, New Jersey, utilizing standard chain-of-custody procedures.

Analytical parameters for the samples collected within the excavations consisted of petroleum hydrocarbons (PHC) for all samples, 25 percent of the samples for volatile organic compounds (VOCs) plus 15 non-targeted compounds (VOC + 15), and 25 percent of the samples for base/neutral (B/N) compounds plus 15 non-targeted compounds (B/N + 15).

The analytical results indicate that soils remaining in some areas of the site contain concentrations of petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), and base/neutral extractable (B/N) compounds slightly above the cleanup levels specified in a letter from the NJDEP to Mr. W. Robinson Frazier, counsel for the Guignon & Green Company, dated August 9, 1989. The excavated areas, the sampling locations, and the analytical results are depicted on Figures 1 through 3.

Although the results indicate a slight exceedance of the specified cleanup levels, area conditions indicate that further excavation may not remove the source of contamination. The New Jersey Geological Survey (NJGS) Case Index indicates that numerous documented contamination sites exist within a 5-mile radius of the Guignon & Green property. These cases reportedly involved the disposal of organic solvents, fuel oils, metals, and other pollutants to the land surface, ground water, and surface water. Commercial and industrial facilities are located upstream along the ditch that runs parallel to the southern border of

the Guignon & Green property. This ditch overflows onto the site periodically. Off-site surface water also enters the property from the northeastern portion of the site adjacent to excavated Area C. Substantial portions of the site are flooded during heavy precipitation events. It is likely that many of the organic contaminants detected in the soil samples have been introduced via flood waters brought on-site from nearby ditches and swales which are visibly contaminated from a variety of sources.

Due to the location of the site near commercial and industrial facilities and the periodic flooding of the site during heavy periods of precipitation, Geraghty & Miller concludes that no additional excavation is warranted for the soils remaining in place, and it is proposed to backfill and pave the areas of concern at the Guignon & Green property.

The NJDEP letter of August 9, 1989 states that Monitoring Wells MW-2, MW-3, and MW-4 shall be sampled and analyzed for VOCs, B/N compounds, and PHCs. As you are aware, Monitoring Wells MW-2 and MW-4 have been destroyed and they will have to be reinstalled. Guignon & Green is prepared to reinstall the wells for the required sampling; however, we would require an extension of the November 27, 1989 deadline. In addition, we are requesting NJDEP concurrence that further excavation is not required prior to well reinstallation.

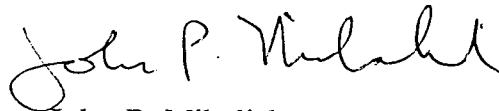
The excavated soil has been characterized and is awaiting acceptance by a disposal facility. A report of the total amount of soil disposed and the proper disposal documentation will be submitted to the NJDEP once disposal takes place.

ATTACHMENT 14

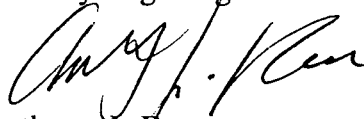
We thank you for your prompt attention to this information, and we hope this letter addresses the concerns of the NJDEP. We will await your response prior to taking any further action regarding monitoring well installation and ground-water sampling. If you have any questions or require additional information, please call.

Sincerely,

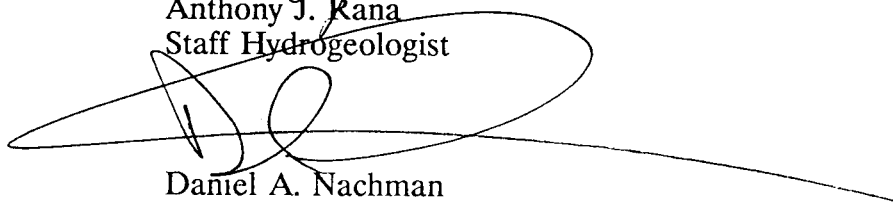
GERAGHTY & MILLER, INC.



John P. Mihalich
Staff Hydrogeologist



Anthony J. Rana
Staff Hydrogeologist



Daniel A. Nachman
Senior Associate

enclosures

/es

cc: W. Robinson Frazier, Esq.
Frazier & Frazier

#NJ03502\110389

ATTACHMENT 15

MW-1

MASONRY BUILDING

No. 410
WAREHOUSE

FENCE

DRAINAGE
DITCH

FENCE

BLDG

MW-2

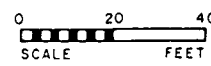
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MW-4

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GAUGE

LEGEND

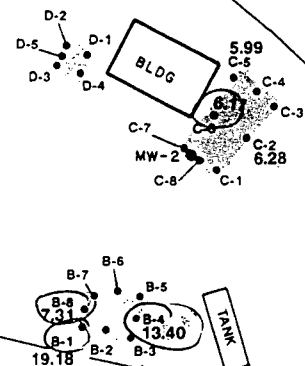
- MW-1 MONITORING WELL
- C-2 SOIL SAMPLING LOCATION AND CONCENTRATION IN PPM
8.28
BLANK WHERE NOT ANALYZED
- SOIL SAMPLING LOCATION AND CONCENTRATION IN PPM

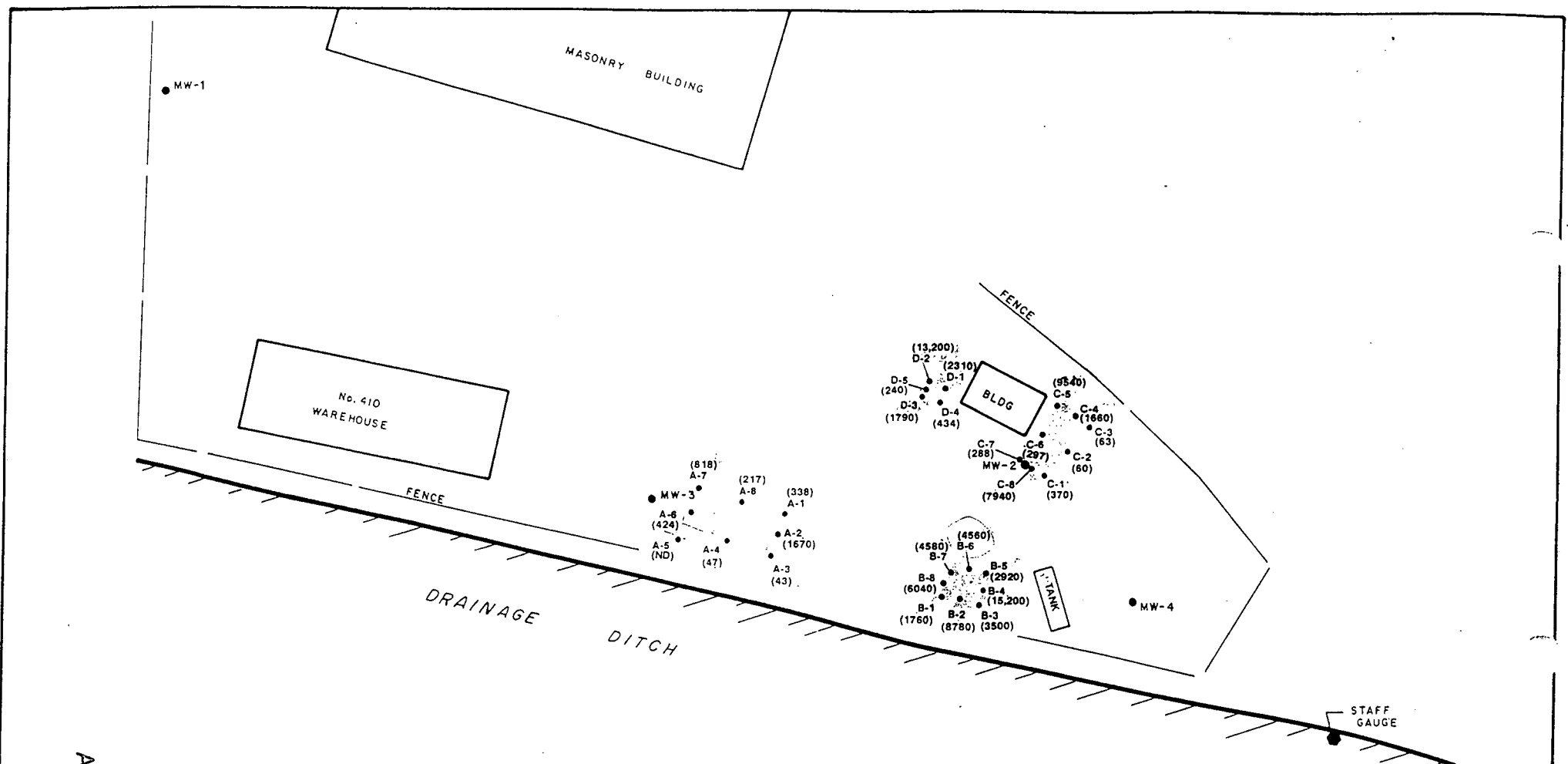


DISTRIBUTION OF TOTAL
BASE/NEUTRAL EXTRACTABLE
COMPOUNDS IN SOIL

GUIGNON & GREEN

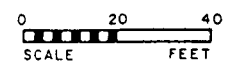
Geraghty & Miller, Inc.	COMPILED BY RANA	SCALE SHOWN	DATE 10/89	3
	PREPARED BY MESSINGER			
	PROJECT MGR NACHMAN			





LEGEND

- MW-1 MONITORING WELL
- C-2 (60) SOIL SAMPLING LOCATION AND CONCENTRATION IN PPM
- ND NOT DETECTED
- SOIL EXCAVATION



<p>DISTRIBUTION OF TOTAL PETROLEUM HYDROCARBONS IN SOIL</p>			
<p>PREPARED FOR: GUIGNON & GREEN</p>			
<p>Geraghty & Miller, Inc.</p>	<p>COMPILED BY: RANA</p> <p>PREPARED BY: MESSINGER</p> <p>PROJECT MGR: NACHMAN</p>	<p>SCALE: SHOWN</p> <p>DATE: 10/89</p>	<p>PAGE: 1</p>

ATTACHMENT 17

1-MW

1 MW-1 MONITORING WELL

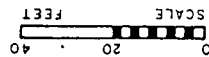
SOIL SAMPLING LOCATION AND CONCENTRATION IN PPM
BLANK WHERE NOT ANALYZED

98.9.

038.

ANALYTE ALSO DETECTED IN LABORATORY BLANK SAMPLE

ND NOT DETECTED

☐ SOIL EXCAVATION

DISTRIBUTION OF TOTAL
VOLATILE ORGANIC COMPOUNDS
IN SOIL

GUIGNON & GREEN

1-MW

MASONRY
BUILDING

No. 410
WAREHOUSE

~~ENCE~~

DRAINAGE

DITCH

FENCE

BLDG

44

ANK

PHC

STAFF
GAUGE

Geography & Miller, Inc.	COMPTON 87	RANA	SCALES	SHOWN	DATE	10/89
	REGISTERED 87	MESSINGER				
	PROJECT 87A	NACHMAN				

Table 1. Results of Soil Analysis, Guignon & Green, Kearny, New Jersey.

Parameter	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8	D-1	D-2	D-3	D-4	D-5	
Volatile Organic Compounds (VOCs)																														
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	760JB	NA	NA	NA	NA	NA	NA	NA	NA	1500B	NA	NA	NA	510JB	NA	NA	NA	NA	NA	NA	NA	2500B
Ethyl benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	2200	NA	NA	11000	NA	NA	NA	NA	NA	420J	NA	NA	NA	330J	NA	NA	NA	NA	NA	NA	NA	210J
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	1700B	NA	NA	NA	NA	NA	NA	NA	NA	3400B	NA	NA	NA	1100JB	NA	NA	NA	NA	NA	NA	NA	6630B
Trichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	860J	NA	NA	NA	NA	NA	NA	NA	NA	850J	NA	NA	NA	570J	NA	NA	NA	NA	NA	NA	NA	330J
Xylenes	NA	NA	NA	NA	NA	NA	NA	NA	850J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOCs																														
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ATTACHMENT J



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

CN 028
Trenton, N.J. 08625-0028
(609) 633-7141
Fax # (609) 633-1454

APR 25 1990

Certified Mail
Return Receipt Requested

Robinson Frazier
Frazier & Frazier, Attorney at Law
Suite A
1515 Riverside Avenue
Jacksonville, Fla 32204

Dear Mr. Frazier:

Re: Guignon and Green Company
Kearny Town, Hudson County
ECRA Case #86034
Cleanup Results Dated: November 16, 1989
Letter Dated: February 12, 1990

The Department has completed its review of the above referenced report and finds the conclusions and recommendations to be unacceptable. The August 6, 1989 letter from the Department detailed the requirements to be achieved during the "at peril" investigation proposed in the July 25, 1989 letter from W. Robinson Frazier.

The Department's August 9, 1989 letter outlined the requirements for the excavation of former sampling locations as well as establishing site specific cleanup levels for the contaminants of concern (i.e. Total Petroleum Hydrocarbons (TPHC) 500 ppm; Volatile Organics (VO+15) 1 ppm total; Base Neutrals (BN+15) 10 ppm total). In addition, the August 9, 1989 letter required the resampling of three of the four on-site monitoring wells for VO+15, BN+15 and TPHC. Guignon and Green was notified that if the wells were destroyed during the excavation of the contaminated soil, then new wells may be required pending the results of the additional ground water sampling. The additional ground water samples were required because of an increasing trend in the levels of ground water contamination between the first and second ground water sampling episodes. The additional round of ground water samples were not obtained.

The argument that the drainage swale has contributed to the contamination on the facility has not been justified with sound technical data. When comparing the sample results in the swale, an increasing trend is evident from the up gradient sampling location to the down gradient sample location. The up gradient sediment sample had approximately 12 ppm Base Neutral contamination. The midpoint sample location indicated approximately

ATTACHMENT 51



87 ppm Base Neutral contamination, while the down gradient sample location indicated approximately 91 ppm Base Neutral contamination. This suggests a source of contamination originating somewhere on site. If the contamination was in fact from an up gradient off-site source, the contamination levels in the swale should be more uniform or at a higher concentration level in the up gradient location, reverse of the actual results achieved.

Although Base Neutrals were found on-site above the site action level of 10 ppm in some sample locations, numerous sample locations with analysis for Base Neutrals indicated results below the site cleanup level. If the contamination detected on-site was in fact from periodic flooding of the site with contaminated water and sediments, then a more uniform contaminant concentration should be present across the site. The areas required to be excavated and sampled resulted from the observation of stained soil by Department officials during the initial site inspection, thus the results achieved are site specific.

The post-excavation results report dated November 16, 1989 indicated contaminant concentrations above the cleanup levels established for the site in the August 9, 1989 letter from the Department. The proposal for no further action is unjustified.

Guignon and Green shall submit an administratively responsive and technically complete Sampling Plan that proposes the complete delineation of the contaminants of concern, for each area of concern. The site specific action levels established for the facility are:

Total Petroleum Hydrocarbons	500 ppm
Base Neutrals + 15	10 ppm (total)
Volatile Organics + 15	1 ppm (total)

For delineation purposes and economic reasons, Guignon and Green may choose to analyze all samples for TPHC only, until the 500 ppm action level has been fully delineated. Once the TPHC 500 ppm boundary has been established, sample analysis shall also include BN+15 and VO+15 in all the periphery samples to confirm the action levels for these contaminants of concern have also been achieved. If the BN+15 10 ppm and the VO+15 1 ppm action levels have not been achieved, then delineation efforts shall continue.

In addition to the required soil contamination delineation, Guignon and Green shall propose the reinstallation of former monitor wells MW-2 and MW-4 and propose the resampling of the proposed monitoring wells MW-2 and MW-4 and existing monitor well MW-3. Sample analysis shall include VO+15, BN+15 and TPHC. As required in the February 7, 1989 and the August 9, 1989 letters from the Department, Guignon and Green shall investigate the cause of the increased naphthalene and TPHC levels experienced in monitoring well MW-2 between the February 9, 1988 and the August 18, 1988 sampling episodes. At a minimum this shall include the following:

- a. identification of all materials used and/or generated which contain naphthalene shall be specified;
- b. the percentage of naphthalene per product shall be specified; and

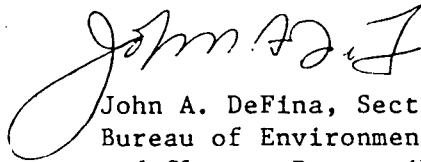
- c. potential sources, other than Guignon and Green shall be identified and documented. No assumptions shall be used to support a no further action proposal.

Additional rounds of ground water sampling and analysis may be required in the future, pending the results of the additional sampling required herein, to document that source removal is complete.

Guignon and Green shall submit the Sampling Plan required above within 30 days upon receipt of this letter. Failure to meet the deadline will result in a referral to the Bureau of ECRA Applicability and Compliance (BEAC) for the assessment of appropriate penalties.

This letter was prepared by the Case Manager, Joshua Gradwohl. Any questions regarding this letter shall be directed to the Case Manager at (609) 633-7141.

Sincerely,



John A. DeFina, Section Chief
Bureau of Environmental Evaluation
and Cleanup Responsibility Assessment

JPG/dg

c: Daniel Nachman, Geraghty & Miller
Clement Horst, Guignon and Green Company
J. Eck, NJDEP/BGWDC
J. Morrow, NJDEP/BEERA
Edward Grosvenor, Health Officer

ATTACHMENT J3

ATTACHMENT K



February 12, 1990

Mr. Steve Mayberry
New Jersey Department of Environmental Protection
ECRA - Industrial Site Evaluation Element
Division of Hazardous Waste Management
CN 028
Trenton, New Jersey 08625

Re: Guignon & Green Facility, Kearny, New Jersey, ECRA Case # 86034

Dear Mr. Mayberry:

We are writing this letter to summarize the status of the above-referenced ECRA case. On January 30, 1990 we learned from Mr. Blaine Fresco, of your element, that he was no longer the case manager for this site. Through subsequent telephone conversations we learned that you had become the new case manager. This recent change brings the total number of case managers who have been assigned to this site within the last five years to four. There have been several investigatory phases in response to continuing requirements from the New Jersey Department of Environmental Protection (NJDEP).

The Guignon & Green facility handled turpentine and fatty acids and other natural products. The facility did not store or utilize hazardous substances, and only small volumes of fuel were needed. The facility is located in an industrial and commercial area, in a low lying portion of Kearny. The facility is surrounded on two sides by a drainage ditch and swale, from which water frequently floods portions of the facility. This flooding is a potential source of incoming contamination, since nearby properties have received disposal of garbage and other wastes. The surface water bodies often show visible evidence of impact from disposal practices.

ATTACHMENT K1

Geraghty & Miller's involvement with this site began in May 1986, when we were retained by Guignon & Green to provide environmental consulting services with respect to an investigation of soil quality conditions at their facility in Kearny, New Jersey. The objective of the study was to evaluate the impact of facility operations on surficial soil quality and to satisfy investigative requirements of the Environmental Cleanup Responsibility Act (ECRA) of the State of New Jersey. The results of this investigation are summarized in a report submitted to the NJDEP in 1986 entitled "Soil Sampling and Spill Delineation, Guignon & Green, Kearny, New Jersey." This initial soil investigation showed the presence of total petroleum hydrocarbons (TPH) in soil in the range of below the detection limit to 18,000 milligrams per kilogram (mg/kg). The possibility exists that these high TPH readings may be attributed to turpentine and other natural products.

On February 20, 1987, a meeting was held at the offices of the NJDEP-Bureau of Industrial Site Evaluation (NJDEP-BISE). In accordance with the agreement reached at the meeting, a workplan was prepared for a ground-water quality investigation at the facility. A workplan entitled "Workplan for a Ground-Water Quality Investigation at the Guignon & Green Company, Kearny, New Jersey" was submitted by Geraghty & Miller in February 1987 and approved by the NJDEP on August 21, 1987.

The ground-water quality investigation was carried out from January through March 1988 in accordance with the approved workplan and the NJDEP's specified conditions. In April 1988, a report entitled "Results of the ECRA Site Investigation at the Guignon & Green Facility, Kearny, New Jersey" was submitted to the NJDEP summarizing the results of this investigation.

In August 1988, a second round of ground-water samples were collected at the request of Ms. Jennifer Feinberg, then the NJDEP-BISE case manager for this site. A letter report was submitted in November 1988 to the new case manager, Mr. Blaine Fresco, NJDEP-BISE summarizing the results of this sampling event. The investigation revealed low levels of volatile organic compounds (VOCs) and base/neutral extractable organic compounds (BNs). Some of these compounds were also detected in surface water and

sediment samples in the ditch adjacent to the Guignon & Green facility, and it is felt that the presence of these compounds at Guignon & Green originated from off-site.

At the request of the NJDEP, Geraghty & Miller resubmitted the report on the soil quality investigation conducted in August 1986. NJDEP also indicated that additional soil excavation would be required; in response, a description of previous soil excavation conducted at the site and a proposed plan for additional soil excavating was submitted in a letter to Mr. Fresco dated January 5, 1989.

After a review of this proposal, the NJDEP issued a letter that requested that the Guignon & Green Company submit a Formal Cleanup Plan to the Department. On April 3, 1989, a document was submitted to the NJDEP entitled "ECRA Cleanup Plan for the Guignon & Green Facility, Kearny, New Jersey."

On August 9, 1989 the NJDEP authorized the Guignon & Green Company to "proceed at peril" with the proposal to excavate soils and collect post-excavation samples for delineation purposes with specified conditions. On September 28, 1989 Geraghty & Miller coordinated soil excavation within four areas on the Guignon & Green facility and collected post-excavation samples. Following a site meeting with Mr. Blaine Fresco, a letter report was submitted to the NJDEP on November 6, 1989 summarizing the analytical results from the post-excavation sampling. The results indicated that the majority of impacted soils had been removed. Small residual concentrations of TPH and VOC remained in a few samples. However, the removal of the thin residual soils would not remediate contamination, since flooding from nearby surface water bodies repeatedly introduces contamination to the site.

Since the time when this last letter report was submitted, we learned through subsequent telephone conversations with Mr. Fresco that the contents of this letter report were being reviewed by his technical coordinator and we could expect comments back from the NJDEP in December 1989. To date, we have not received any communication from the NJDEP.

ATTACHMENT K3

At the facility the excavations remain open, and as such disrupt the present occupant's business operations. The excavations were to remain open until we learned from the NJDEP if additional excavating was required. The stockpiled soils are still at the site and await disposal.

As stated previously, this most recent reassignment of case managers brings the total number assigned to the site over the last five years to four. A chronology of case managers for this ECRA case are summarized below:

<u>Case Manager</u>	<u>Dates assigned</u>
Mr. Michael Metlitz	1986 to 1988
Interim Manager: Mr. Eric Fox	
Ms. Jennifer Feinberg	May 1988 to August 1988
Interim Manager: Mr. Eric Fox	
Mr. Blaine Fresco	August 1988 to January 1990
Mr. Steve Mayberry	February 1990

In summary, numerous investigatory phases have been implemented in response to requirements specified by ECRA case workers. Impacted soils have been excavated and await proper disposal. The remaining low levels of organic compounds in soil do not represent a hazard, especially in light of the location of the site in a heavily industrial portion of Kearny, in proximity to landfills and unauthorized dumping grounds. The repeated flooding of the site from nearby surface water bodies of poor quality implies that contaminants will continually be introduced to the soil and ground water under the site. This ECRA case, for a site that did not handle hazardous substances, has dragged on for an unwarranted period of time and should be brought to a rapid conclusion. We feel that additional investigation is unwarranted and that, once the soil is disposed, a negative declaration is in order.

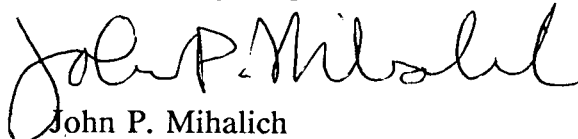
We would like to meet with you and your technical advisors on this matter at your earliest convenience. Please advise us when such a meeting could be arranged. If you should have any questions or require additional information, please call.

Sincerely,

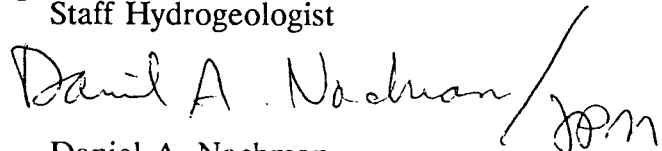
GERAGHTY & MILLER, INC.

Handwritten signature of Anthony J. Rana in black ink, followed by a diagonal slash and the initials "JPM".

Anthony J. Rana
Staff Hydrogeologist

Handwritten signature of John P. Mihalich in black ink.

John P. Mihalich
Staff Hydrogeologist

Handwritten signature of Daniel A. Nachman in black ink, followed by a diagonal slash and the initials "JPM".

Daniel A. Nachman
Senior Associate

- c: W. Robinson Frazier, Esq.
Ken Hart, Chief, Bureau of Environmental Evaluation Cleanup and Responsibility Assessment
John DeFina, Section Chief, Bureau of Environmental Evaluation Cleanup and Responsibility Assessment
Richard Dewan, Supervisor, Bureau of Environmental Evaluation Cleanup and Responsibility Assessment
Dawn M. Pompeo, Section Chief, Bureau of Environmental Evaluation Cleanup and Responsibility Assessment
Blaine Fresco, Bureau of Environmental Evaluation Cleanup and Responsibility Assessment

AJR/cmw:gv
#NJ03502/013190.

ATTACHMENT K5

ATTACHMENT L

**SAMPLING PLAN ADDENDUM
GUIGNON & GREEN SITE
KEARNY, NEW JERSEY**

Prepared for

Guignon & Green Company

May 1990

**Geraghty & Miller, Inc.
Environmental Services
290 Vincent Avenue
Hackensack, New Jersey 07601**

ATTACHMENT L1

GERAGHTY & MILLER, INC.

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TABLE

1. May 1990 Sampling Plan Addendum Summary Table, Guignon & Green Site, Kearny, New Jersey.

FIGURES

1. Site Location Map, Guignon & Green Site, Kearny, New Jersey.
2. Surrounding Area of the Guignon & Green Site, Kearny, New Jersey.
3. Locations of Proposed Excavation and Soil Samples, Guignon & Green Site, Kearny, New Jersey.
4. Project Schedule, May 1990 Sampling Plan Addendum, Guignon & Green Site, Kearny, New Jersey.

APPENDICES

- A. Quality Assurance/Quality Control
- B. Laboratory QA/QC Documentation

ATTACHMENT L2

SAMPLING PLAN ADDENDUM
GUIGNON & GREEN SITE
KEARNY, NEW JERSEY

INTRODUCTION

This sampling plan addendum (SPA) was prepared by Geraghty & Miller, Inc. in response to a letter from the New Jersey Department of Environmental Protection (NJDEP) dated April 25, 1990 (DeFina, pers. comm. 1990) and in accordance with the Environmental Cleanup Responsibility Act (ECRA) Draft Sampling Plan Guide (New Jersey Department of Environmental Protection 1988a). The initial sampling plan was approved by the NJDEP and implemented in August 1986 (Fallon, pers. comm. 1986; Geraghty & Miller, Inc. 1986). A report on the initial sampling and analysis was submitted to the NJDEP in October 1986 (Geraghty & Miller, Inc., pers. comm. 1986).

Based on agreements made during a meeting between the NJDEP, Geraghty & Miller, and representatives of the Guignon & Green Company in February 1987, a work plan for a ground-water investigation was submitted to the NJDEP (Geraghty & Miller, Inc., pers. comm. 1987). This work plan was implemented from January through March 1988 in accordance with NJDEP-specified conditions (Fallon, pers. comm. 1987). A report on this investigation was submitted to the NJDEP in May 1988. At the request of the NJDEP, a second round of ground-water samples was collected in August 1988 and the results were submitted to the NJDEP in November 1988 (Geraghty & Miller, Inc., pers. comm. 1988).

In response to a request from the NJDEP (Defina, pers. comm. 1989), Geraghty & Miller submitted a cleanup plan in April 1989 (Geraghty & Miller, Inc. 1989). The cleanup plan was not approved by the NJDEP. However, the NJDEP accepted the proposal to excavate contaminated soil and collect post-excavation soil samples for delineation purposes (Pompeo, pers. comm. 1989).

Soil was excavated in September 1989 and the results from post-excavation soil sampling were submitted to the NJDEP in November 1989 (Geraghty & Miller, Inc., pers. comm. 1989). Discussions with the NJDEP indicated that, although minor additional soil

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excavation may be required, extensive excavation is not feasible and unnecessary due to the low levels of contamination at the site, the location of the site in an industrialized area, and the potential for contamination from off-site sources (Fresco, pers. comm. 1989a; 1989b). These discussions also indicated that the installation of Monitoring Wells MW-2 and MW-4 (which were destroyed during activities at the site by the current occupant) and subsequent ground-water sampling should be conducted after excavation activities are completed. The location of the Guignon & Green site is shown on Figure 1.

In May 1990, Geraghty & Miller conducted a site visit in preparation for the sampling plan. During this visit, Geraghty & Miller was informed by Mr. John Cali of Cali Carting Company, the current occupant of the site, that representatives of the NJDEP had been at the site on May 21, 1990, to investigate a report of a potential oil spill. Geraghty & Miller toured the site and the surrounding area in an attempt to determine the areal extent and to locate a potential source of the oil, which formed a ponded body at the eastern end of the Guignon & Green property. Mr. Cali informed Geraghty & Miller that the oil was beginning to encroach upon the property.

Geraghty & Miller followed the oil upgradient along a swale which drains from the north of the Guignon & Green property near Bergen Avenue between the Reliable-Miller Casket Company and the railroad track east of the site (Figure 2). None of this oil was observed in other drainage swales in the area, which are shown on Figure 2.

In early May 1990, Mr. Cali had removed some vegetation from the eastern end of the property (where the oil is now located) to allow trucks to enter his property from Bergen Avenue. Approximately one week after cutting down the vegetation, Mr. Cali noticed the oil. There were no obvious sources of the oil; however, it appeared that the area could have been accessed illegally from either Bergen Avenue or an open entrance off of Wilson Avenue where a condominium building project has been initiated. According to Mr. Cali (Cali, pers. comm. 1990) the Reliable-Miller Casket Company had left their gate on Bergen Avenue open continuously for approximately 2 weeks while they were building a new wall on their property, just prior to the initial discovery of the spill.

No product has been observed in any of the Guignon & Green site's monitoring wells. In addition, monitoring wells located on the Interstate Concentrate Company Site, which is south of the Guignon & Green Site, have shown no evidence of product (Sachs, pers. comm. 1990). There have been no soil borings in the area of the oil.

ENVIRONMENTAL SETTING

Site Description

The Guignon & Green Site is located in a low-lying industrialized area in Kearny, New Jersey (Figure 1). The site is bounded immediately to the west and south by drainage swales and bodies of ponded surface water. There is also a swale east of the site that drains from the north onto the eastern end of the Guignon & Green property. At certain times of the year this surface water overflows onto the Guignon & Green property, inundating large portions of the site. Sampling of surface water and sediment in the ditch south of the Guignon & Green Site indicates that these ponded surface water bodies contain contamination that could be emanating from neighboring facilities and disposal practices in the area. The Guignon & Green property is subject to influx of surface water from the drainage swale that drains eastward on the south side of the property, or from the ponded water directly to the east, indicating at least two potential directions of contaminant transport on site. As such, the potential exists that the Guignon & Green Site has been and may continue to be contaminated by overflow of drainage swales and ponded surface water.

Commerical and industrial facilities surround the site and are located upstream along the swales that run adjacent to it. Numerous contamination incidents in Kearny, New Jersey have been reported and are under investigation by the NJDEP (New Jersey Department of Environmental Protection 1988b).

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Geraghty & Miller conducted a reconnaissance of the Guignon & Green Site and the surrounding area on May 25, 1990. Commercial and industrial facilities in the area are shown on Figure 2. These facilities include the following:

- o Kent International
- o M&A Machinery Center, Inc.
- o Garry Plastics
- o Tudor Products Company, Inc.
- o Wikita Packaging Corporation
- o Wikita Folding Box Company
- o A&P
- o Interstate Concentrate Company
- o Honeycomb Plastics Corporation
- o Warner Manufacturing Corporation
- o Portosan
- o Reliable-Miller Casket Company

Also shown on this figure are the major drainage swales and ponded surface water bodies in the area of the site. (There are many smaller swales and ponds in the area which are not shown on this figure).

The largest body of water drains paved and unpaved land in the vicinity of the Honeycomb Plastics Corporation and the Interstate Concentrate Company, a metals separating firm. A swale to the north of this surface water body drains a paved parking lot adjacent to a building marked as the Wikita Folding Box Company. During the visit, a gasoline-type sheen was observed on the water surface in this drainage swale, which converges with the large surface water body and then flows toward a smaller ponded surface water body at the eastern end of the Guignon & Green Site. The drainage swale immediately south of the site drains to the east-southeast and also collects in this smaller ponded surface water body.

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The third drainage swale is located immediately north of the Guignon & Green property adjacent to the former pump house and the aboveground tank storage area. This swale was created by Cali Carting Company to prevent flooding of the property. This swale flows to the east-southeast and collects in the smaller surface water body. Finally, a drainage swale that runs parallel with and adjacent to the railroad tracks to the east of the site drains the area east of the Reliable-Miller Casket Company, as well as the banks of the railroad track, which is elevated in this area. This swale also drains into the smaller surface water body. A swale adjacent to the railroad track to the southeast of the site drains toward or away from Guignon & Green, depending on the amount of precipitation. Black oily sediment and an oily sheen on the water (which was draining toward the site) was observed in this area during the site visit.

The smaller surface water body, therefore, collects water from north, south, east, and west of the site. This is the body of water from which a sediment sample contained base/neutral acid extractable organic compounds (BNAs) in greater concentrations than a sediment sample collected upgradient of the site.

The property between the site and the larger ponded surface water body has recently been graded and is the site of future condominium buildings. The area to the east of the large surface water body is the site of refuse disposal. The soil in this area is black and appears to be heavily stained. There are other smaller areas of refuse disposal upgradient of the site.

Site History

Guignon & Green has occupied the property since 1966 and acquired title to the property in approximately 1983. The site was reportedly not used for commercial or industrial purposes prior to 1966. Guignon & Green used the property for the temporary storage and wholesale marketing of creosote, pine oil, turpentine, and related products. No manufacture has taken place at the facility, and hazardous materials have not been stored or transferred onsite. Cali Carting Company, a garbage transporting business, has occupied

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the site since 1985 and is in the process of purchasing the property. Cali Carting Company uses the property for parking garbage trucks, and no garbage is transported to or stored on site.

Topography and Drainage

The site is located immediately west of the Hackensack Meadowlands between the Passaic River, which is approximately one mile to the west of the site, and the Hackensack River, which is approximately 2.5 miles to the east of the site. The site is at an elevation of approximately 15 feet above mean sea level. Land elevation increases to approximately 120 feet above mean sea level west of the site. Surface water drains toward the Passaic River to the west of this divide, and toward the Hackensack River to the east of this divide. Regionally, surface water in the area of the site drains toward the Hackensack Meadowlands and ultimately to the Hackensack River.

Geology

Regionally, the uppermost geologic units consist of peat or meadow mat mixed with fine-grained sediments. Underlying this organic-rich upper layer are clay and silt deposits associated with sedimentation in a glacial lake that occupied the region 10,000 to 15,000 years ago. The fine-grained lake deposits are in turn underlain by glacial till composed mostly of sand and gravel (Agron 1980).

The bedrock beneath the unconsolidated deposits consists of shale and sandstone of the Triassic-Jurassic age Passaic Formation of the Brunswick Group (Lyttle and Epstein 1987). The bedrock is exposed approximately 0.5 mile to the west of the Guignon & Green site; the bedrock surface slopes steeply to the east toward the Hackensack River valley (New Jersey Geological Survey 1959; State of New Jersey 1968).

Geologic logs of Monitoring Wells MW-1 through MW-4 indicate that the site is underlain by up to 2 to 4 feet of fill, which consists predominantly of silt, sand, gravel, and

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cement fragments. A mixture of predominantly clay, silt, and peat underlies the fill to a depth of up to approximately 7 to 10 feet below ground surface. The fine sediment grades into a well-sorted, fine to medium sand to a depth of up to at least 14 feet below ground surface, which is the approximate depth of the deepest monitoring well. Bedrock was not encountered during the drilling of these monitoring wells.

Hydrogeology

A well inventory of water withdrawal points within a one-mile radius of the site identified only one water supply well. This well, and the majority of other wells within a 5-mile radius of the site, derive water from the bedrock Brunswick Group (Geraghty & Miller, Inc. 1988).

The water table at the site is within a few feet of ground surface (Geraghty & Miller, Inc. 1988; 1989) at an elevation of approximately 10 feet above mean sea level. Based on water-table elevation data collected from previous investigations, ground water in the shallow water-table aquifer flows to the east-southeast (Geraghty & Miller, Inc. 1988). The hydraulic gradient is approximately 0.00125 foot/foot.

Soil Quality

Analysis of soil samples collected in 1986, 1988, and 1989 indicate that small portions of the site are characterized by soil with high concentrations of total petroleum hydrocarbons (TPHC) and slightly elevated concentrations of volatile organic compounds (VOCs) and BNAs with regard to ECRA cleanup guidelines.

Ground-Water Quality

The ground-water quality data from two rounds of sampling indicate that only three contaminants were found in concentrations above ECRA cleanup guidelines: vinyl chloride, naphthalene, and TPHC. During discussions held at the site, previous NJDEP case workers

indicated they were in agreement with Geraghty & Miller that ground-water quality was not of concern and that remediation was not warranted. However, the NJDEP was concerned about the increase in naphthalene concentrations (from approximately 4.8 to 111 micrograms per liter) and TPHC (from less than 1.0 to 4.0 milligrams per liter) in samples from Monitoring Well MW-2 between February 9, 1988 and August 18, 1988 (Fresco, pers. comm. 1988).

Cause of Increased Naphthalene and TPHC

Naphthalene is the most abundant single constituent of coal tar. It crystallizes from the middle or "carbolic oil" fraction of distilled tar (Merck & Co., Inc. 1983). Naphthalene is widely used in the manufacture of hydronaphthalenes, which are used as solvents, in lubricants, in motor fuels, as a moth repellent, and as an insecticide. TPHC is found in relation to gasoline, fuel and lubricating oils, and other products.

There is no documentation indicating that Guignon & Green used naphthalene at the site; however, they did handle creosote, which is a distillate of coal tar (Darabi and Associates, Inc. 1986). Guignon & Green also handled pine oil, which is obtained from pitch-soaked pine wood by steam distillation or destructive distillation (Merck & Co., Inc. 1983). Pine tar is a product of the distillation process.

There is no obvious reason why the increase in naphthalene and TPHC concentrations in ground-water samples collected between February and August 1988 could be related to the Guignon & Green's operations, as they have not occupied the site since 1985. One possibility for the increase is that contamination from an off-site source(s) was transported via surface water flooding which permeated the soil underlying the site. Geraghty & Miller proposes to resample Monitoring Wells MW-2, MW-3, and MW-4 in an attempt to evaluate fluctuations in naphthalene and TPHC concentrations in ground water in the area of Monitoring Well MW-2.

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AREAS OF CONCERN AND SAMPLING ACTIVITIES

The areas of concern are based on the results of post-excavation soil sampling, which revealed slightly elevated levels of VOCs, BNAs, and TPHC. There are four areas of concern, which were identified as areas 1, 2, 3, and 4 in the cleanup plan submitted to the NJDEP in 1989 (Geraghty & Miller, Inc. 1989). These areas were labeled D, C, B, and A, respectively, in the report on the post-excavation sampling results (Geraghty & Miller, Inc., pers. comm. 1989) and will be referred to as such in this sampling plan.

Soil Excavation and Post Excavation Sampling

The purpose of the soil excavation and sampling exercise is to remove contaminated soil and to delineate the extent of soil contamination in the four areas of concern. The post-excavation soil sampling results indicate that additional excavation and sampling is required to reduce soil contaminant levels and to define the extent of soil contamination with regard to ECRA cleanup guidelines for this site (DeFina, pers. comm. 1990). The action levels are as follows:

TPHC	500 parts per million (ppm)
VOCs	1 ppm
BNAs	10 ppm.

Guignon & Green is aware that the extent of contamination in some areas of the site has not been defined and that contaminated soil remains. Geraghty & Miller proposes to immediately remove additional contaminated soil in localized areas and to arrange for classification and proper disposal of the soil. Soil from the smaller areas known to be contaminated based on the results of the previous post-excavation sampling will also be excavated and disposed of properly. Areas to be excavated are shown on Figure 3.

Following excavation, samples will be collected from the excavation limits and analyzed for TPHC. Additional analytical parameters will be dependent on the results of

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the TPHC analysis. Figure 3 shows the proposed locations of the additional samples. A sample summary table is provided as Table 1. Soil will be sampled in accordance with the NJDEP-approved protocol followed during the previous Geraghty & Miller investigation (Geraghty & Miller, Inc. 1986).

Ground-Water Sampling and Analysis

Geraghty & Miller proposes to replace Monitoring Wells MW-2 and MW-4 which were destroyed during earth moving activities at the site. Monitoring Wells MW-2, MW-3, and MW-4 will be sampled for VOCs, BNAs, and TPHC in response to the NJDEP concern regarding the increased naphthalene and TPHC levels identified in Monitoring Well MW-2 between the February 9, 1988 and the August 18, 1988 sampling episodes. Replacement monitoring wells will be installed and ground water will be sampled in accordance with the protocols approved by the NJDEP during the previous Geraghty & Miller investigation (Geraghty & Miller, Inc. 1987).

Quality Assurance/Quality Control

During implementation of this sampling plan, Geraghty & Miller will follow the Quality Assurance/Quality Control (QA/QC) Plan presented as Appendix A. Laboratory QA/QC Documentation is presented as Appendix B.

Health and Safety

The excavation and sampling activities will be initiated using standard Level D protection. Workers will wear hard hats, safety glasses, and protective clothing. A photoionization detector will be used continuously to determine if there is a need to upgrade the level of protection. If the photoionization detector indicates organic compound concentrations in the breathing zone of 5 or more parts per million (ppm) above background concentration levels, standard Level C protection will be implemented, which includes full-face respirators. If the ionization detector indicates concentrations of 100 ppm

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or more appropriate concentrations above background concentration levels, workers will exit the site and the level of protection will be evaluated.

SCHEDULE AND REPORTING

The proposed schedule for implementation of the sampling plan activities is shown on Figure 4. The sampling plan will be implemented on the basis of NJDEP approval. Geraghty & Miller will make every attempt to assure that the project proceeds as efficiently and expeditiously as possible. Items which may delay the progression of the work include regulatory permitting, waste classification, and the identification of appropriate waste disposal sites. Geraghty & Miller will notify the NJDEP at least two weeks prior to initiating any field activities, or as soon as possible following any schedule change.

SUMMARY

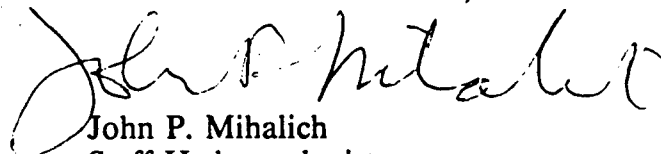
Geraghty & Miller and the NJDEP have agreed in the past that, although soil concentrations in some areas of the site are above ECRA cleanup guidelines, the site does not pose a significant threat to the environment due to its location in a heavily industrialized area (Fresco, pers. comm. 1989a). It is apparent from an examination of land use and surface water drainage patterns that the property is subject to periodic flooding from several directions and that this influx of surface water has the potential to introduce contaminants on-site from a variety of sources. The recent occurrence of oil in surface water bodies from an unknown source is indicative of the types of activity that take place in this area. Furthermore, analysis of sediments and surface water upgradient of the site and the drainage pattern in the area of the site indicate that the site has and may continue to receive contamination from off-site sources. Although the Guignon & Green Company is willing to address the contamination which they may have caused in the past, they feel that they should not be responsible for the investigation and remediation of contamination caused by other, albeit unknown, sources of contamination.

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The results of the proposed excavation and post-excavation sampling episode may indicate the need for additional excavation. If soil contamination persists in small isolated areas following the post-excavation sampling episode, the need for additional soil excavation or capping of impacted areas with pavement will be assessed. If soil with concentrations above ECRA guidelines is widespread following this post-excavation sampling episode, then only the relatively highly contaminated areas will be excavated. Following excavation, the excavated areas will be backfilled with clean soil. Guignon & Green is anxious to implement this plan and will mobilize in a timely manner upon NJDEP approval.

Sincerely,

GERAGHTY & MILLER, INC.



John P. Mihalich
Staff Hydrogeologist



Daniel A. Nachman
Senior Associate

#NJ03502/050890.

ATTACHMENT L14

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ATTACHMENT L16

Table 1. May 1990 Sampling Plan Addendum Summary Table, Guignon & Green Site, Kearny, New Jersey.

Location and Identification	Matrix	Depth of Sample (ft bgs)	Analytical Parameters
<u>Area A:</u>			
A-9	Soil	0-0.5	TPHC
A-10	Soil	0-0.5	TPHC
MW-3	Aqueous	NA	TPHC, VOCs + 15, BNAs + 15
<u>Area B:</u>			
B-9	Soil	0-0.5	TPHC
B-10	Soil	0-0.5	TPHC
B-11	Soil	0-0.5	TPHC
B-12	Soil	0-0.5	TPHC
MW-4	Aqueous	NA	TPHC, VOCs + 15, BNAs + 15
<u>Area C:</u>			
C-9	Soil	0-0.5	TPHC
C-10	Soil	0-0.5	TPHC
C-11	Soil	0-0.5	TPHC
C-12	Soil	0-0.5	TPHC
C-13	Soil	0-0.5	TPHC
MW-2	Aqueous	NA	TPHC, VOCs + 15, BNAs + 15
<u>Area D:</u>			
D-7	Soil	0-0.5	TPHC
D-8	Soil	0-0.5	TPHC
D-9	Soil	0-0.5	TPHC

ft bgs - Feet below ground surface.

TPHC - Total petroleum hydrocarbons.

VOCs - Volatile organic compounds.

BNAs - Base/neutral and acid extractable compounds.

NA - Not applicable.

Trip blank samples will be submitted with each shipment containing water samples for analysis of VOCs + 15.

One field blank will be submitted per matrix per day, not to exceed one field blank for aqueous and two field blanks for soil.

Soil field blank(s) will be analyzed for TPHC.

Aqueous field blank will be analyzed for TPHC, VOCs + 15, and BNAs + 15.

One replicate aqueous sample will be submitted for analysis for TPHC, VOCs + 15, and BNAs + 15.

#NJ03502/SPS.WK1

ATTACHMENT L17



SOURCE: U.S.G.S. 7.5 MINUTE SERIES TOPOGRAPHIC MAP
ORANGE, WEEHAWKEN, ELIZABETH, JERSEY CITY QUADRANGLE.

0 2000
SCALE FEET

SUBJECT

SITE LOCATION MAP

**GUIGNON & GREEN SITE
KEARNY, NEW JERSEY**

ATTACHMENT L18

PREPARED FOR

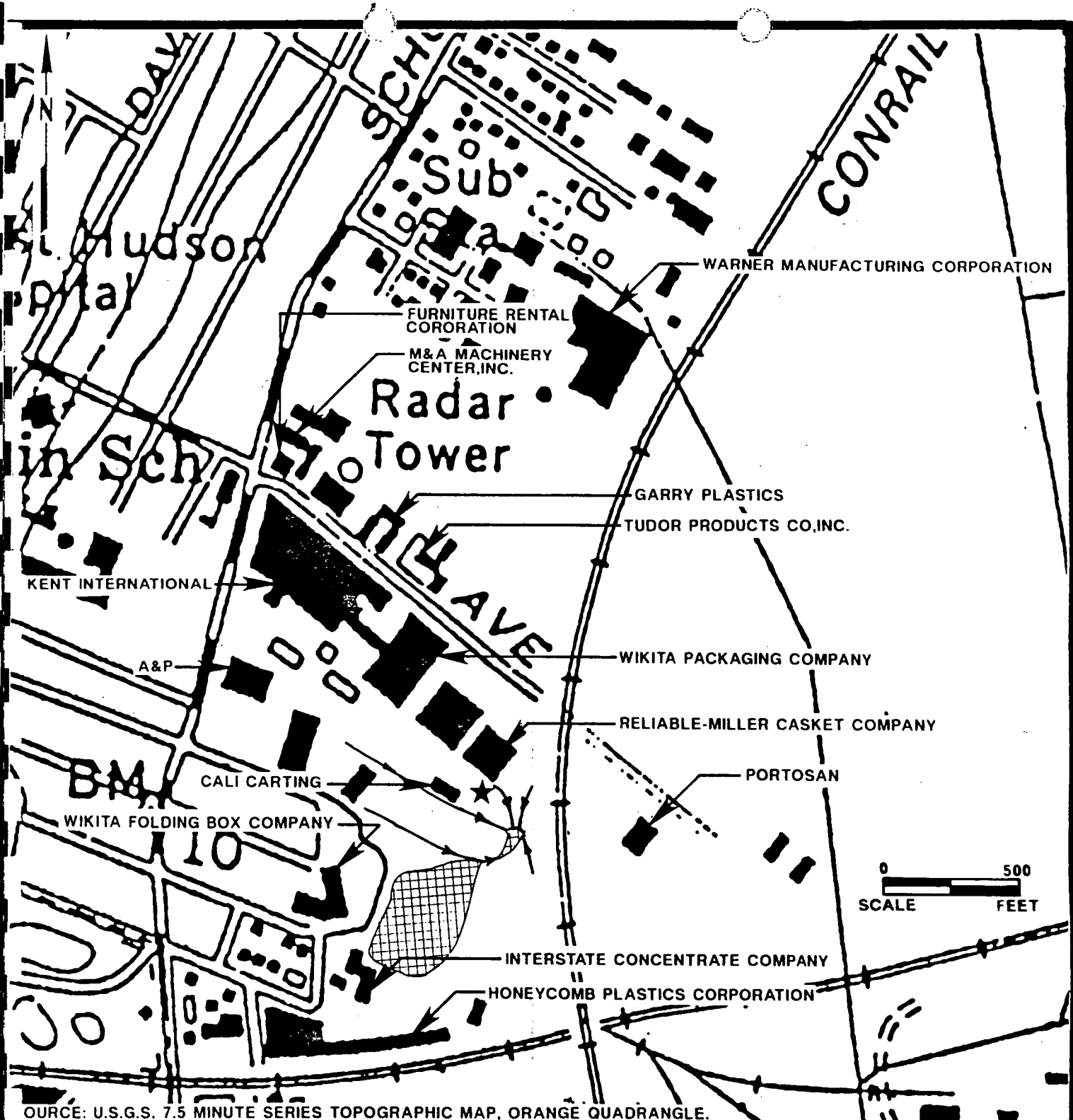
GUIGNON & GREEN

Geraghty
& Miller, Inc.

COMPILED BY J MIHALICH
PREPARED BY A GIAMBATTISTA
PROJECT MGR D NACHMAN

SCALE SHOWN
DATE 5/90

FIGURE
1



LEGEND



PONDED WATER



DRAINAGE SWALE AND
DIRECTION OF FLOW



GUIGNON & GREEN SITE

SUBJECT

SURROUNDING AREA

OF THE GUIGNON & GREEN SITE,
KEARNY, NEW JERSEY

ATTACHMENT 419

PREPARED FOR

GUIGNON & GREEN

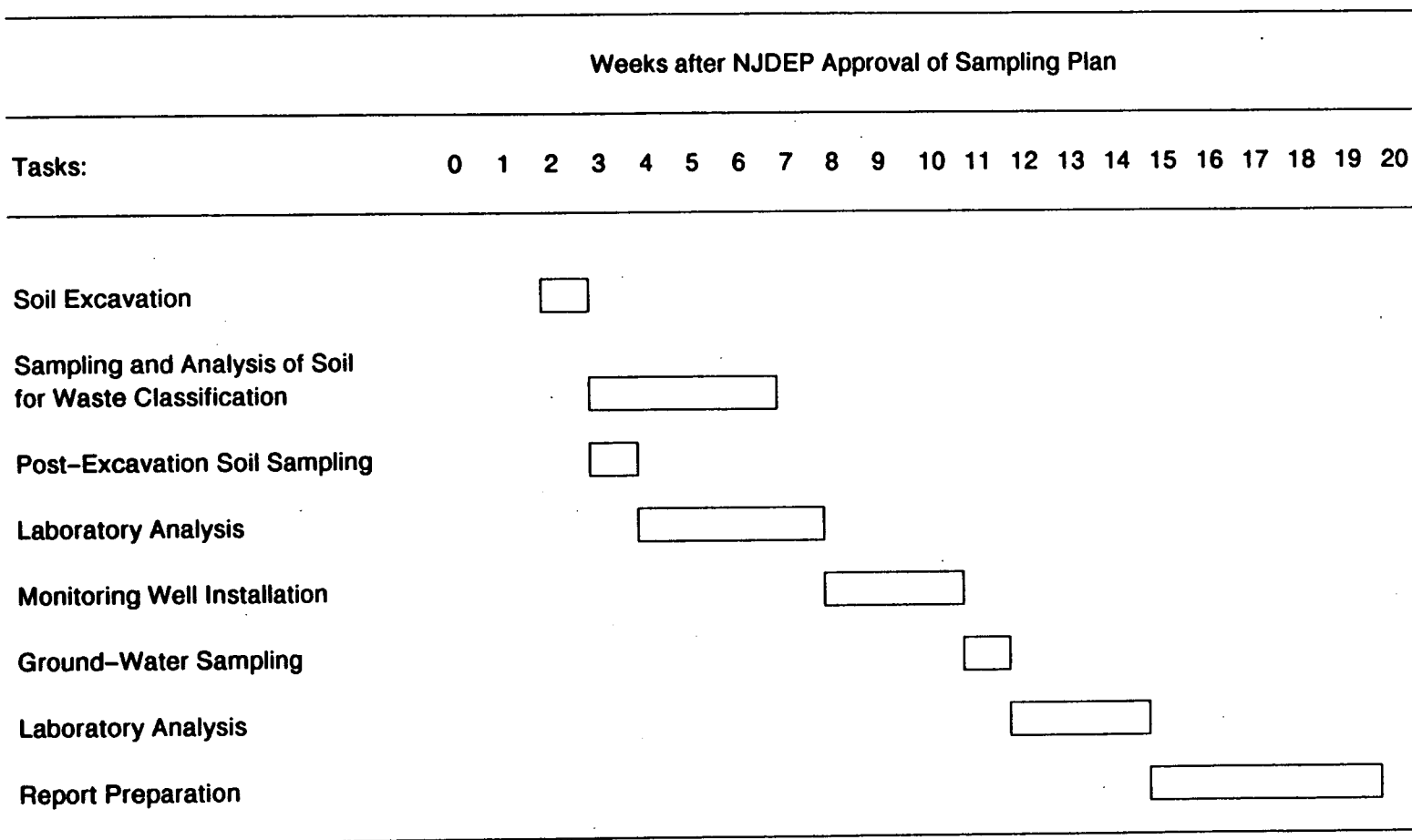
Geraghty
& Miller, Inc.

COMPILED BY J MIHALICH
PREPARED BY A GIAMBATTISTA
PROJECT MGR D NACHMAN

SCALE
SHOWN
DATE 5/90

FIGURE
2

Figure 4. Project Schedule, May 1990 Sampling Plan Addendum, Guignon & Green Site, Kearny, New Jersey.



#NJ03502/SCHED

APPENDIX A
QUALITY ASSURANCE/QUALITY CONTROL

ATTACHMENT L21

APPENDIX A

Quality Assurance/Quality Control Plan

The Quality Assurance/Quality Control (QA/QC) Plan objectives for this project are to provide data of known quality and to be able to defend the quality of that data. The QA/QC objectives for analytical data will enable the analytical data to be evaluated for its precision, accuracy, completeness, representativeness, and comparability. The QA/QC objectives for the field data will ensure the reliability and safety of all documentation generated as a part of this investigation.

The major elements of the QA/QC Plan are: quality control sampling, chain-of-custody procedures and documentation, analytical data review and data management.

1.0 Quality Control Sampling

1.10 Replicate Samples

- 1.11 One replicate water sample will be collected and analyzed for every ten water samples submitted to the laboratory. Care will be taken to ensure that each sample and sample replicate pair can be compared as a homogeneous sample split in two.
- 1.12 Each replicate sample will be given a fictitious sample identification so that it is not identified in the laboratory as a replicate sample.
- 1.13 Soil replicate samples will not be collected.

1.20 Blank Samples

- 1.21 One equipment blank sample will be collected for every ten samples for each sampled medium on every day that sampling occurs. The equipment blank sample for a given day will be analyzed for every parameter analyzed for, in that medium,

on that day. The equipment blank sample will be collected by pouring distilled water over the sampling tool so that the rinsate flows directly into the sample container(s).

- 1.22 One trip blank sample will be submitted to the laboratory per shipment of ground-water samples. Trip blank samples will be provided by the laboratory and each trip blank will accompany the samples. Trip blank samples will be analyzed for VOCs.

2.0 Chain-of-Custody Procedures and Documentation

- 2.1 The sampling team will be responsible for maintaining custody of the empty sample containers once they are released by the laboratory, throughout the sampling activities and until the samples are delivered to the overnight delivery service for shipment to the laboratory. All samples shipped to the laboratory will be accompanied by the Geraghty & Miller, Inc. Chain-of-Custody Record (attached). The Chain-of-Custody Record will be completed in the field; the original form will accompany the shipment and a copy will be retained in the field project file. The Chain-of-Custody form will list each of the individual sample containers, and will be signed by each of the sampling team members who participated in collecting the samples.
- 2.2 A separate Chain-of-Custody Record form will be filled out for the contents of each shipment container (cooler). The form will be placed in a plastic bag and taped to the underside of the lid of the cooler.
- 2.3 To provide a means of detecting any potential tampering during shipment, all shipment containers (coolers) will be affixed with signed Geraghty & Miller, Inc. sample seals (attached). Two seals will be affixed to each cooler, on opposite ends. In addition, a 2-inch wide transparent tape will be wrapped entirely around the cooler.

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- 2.4 The overnight delivery service and number which identifies the shipment will be recorded on the Chain-of-Custody form. A receipt from the overnight delivery service or copy of the airbill identifying each shipment will be retained in the field project file.

3.0 Analytical Data Review

- 3.1 Upon receipt of the data package, the data will be reviewed to evaluate the data quality and to determine if the data and data quality are consistent with the objectives of the investigation.
- 3.2 The data will be reviewed to determine its precision, accuracy, completeness, representativeness, and comparability.
- 3.3 On the basis of the data review, the quality and limitations, if any, of specific data will be noted, as well as the overall quality of the data package. Specific and overall data quality will be discussed in the investigation report.

4.0 Data Management

- 4.1 Field data and documentation will be recorded in serialized sheets for each sampling location and for each day activities occur at the site.
- 4.2 Field procedures, measurements, and observations will be described in sufficient detail, so as to enable others to reconstruct the events.
- 4.3 The project manager will maintain all project documentation in a central project file. This file will include:
- o project plans and specifications
 - o field data and documentation

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- o chain-of-custody documentation
- o sample identification documents
- o laboratory data packages
- o data review notes
- o report notes and calculations
- o correspondence
- o progress and technical reports
- o maps, drawings, photographs